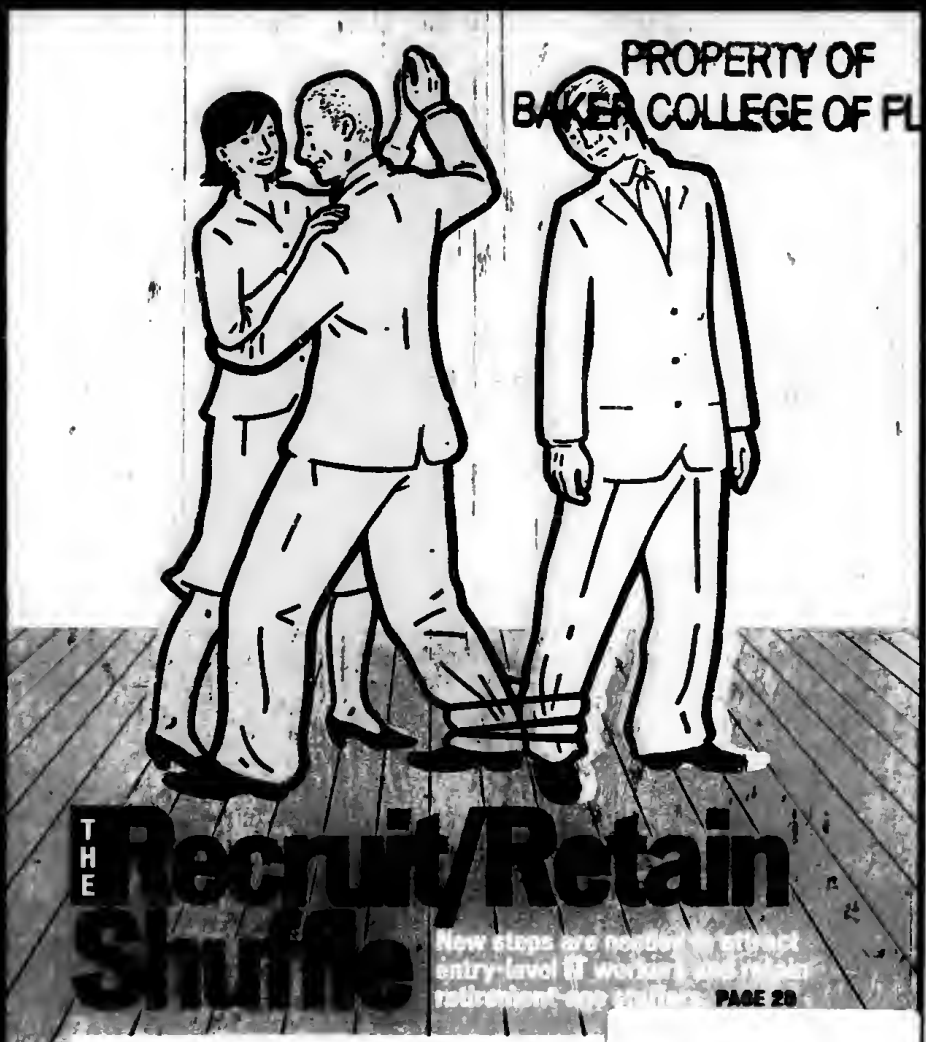
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COMPUTERWORLD



THE Recruit/Retain Shuffle

New steps are needed to attract entry-level IT workers and retain retirement-age staffers. PAGE 28

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It's time to move to the future with the hardware you've got.

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■ EDITOR'S NOTE

Don Tennant

Official Response



WANT TO get the attention of the editor in chief? Try making this comment in response to a story on our Web site: "*Computerworld* is becoming increasingly schizophrenic in its focus." It'll work every time.

Before I get into the context of the comment, let's consider what that focus is supposed to be. Prior to the rebirth of our print edition as a magazine earlier this month, our focus was emblazoned on the front of every issue in the form of our tag line: "The Voice of IT Management." That means we promote the interests of senior IT managers. We facilitate information-sharing among them. We ask the hard questions of vendors that our readers would ask. We serve as their advocate in helping to solve the technology and management problems that confront them every day.

For the magazine, we preferred the sleeker, less cluttered look without the tag line. But make no mistake: The focus is unchanged, and we have in fact rededicated ourselves to ensuring that the magazine truly speaks on behalf of senior IT management.

But what needs to be recognized here is that *Computerworld* is, first and foremost, an online media company. Online, we're able to deliver everything we deliver in print, yet we're also able to engage a much broader readership, including not only senior IT managers, but also IT professionals of all sorts and even workers outside the profession who are IT enthusiasts.

That brings us to our reader's "schizophrenic" assertion. The comment was in response to a story posted on July 23: "Your Boss Is Spying on You Right Now. What Can You Do About It?" The article looks at ways to work around the monitoring of employees' online activity.

This reader went on to say that there's nothing wrong with providing stories geared for end users. "However," he wrote, "if *Computerworld* is going to . . . remain a premier source for business computing information, even its articles for users need to be written with an eye toward the requirements of business IT. *Computerworld* should *never* publish *any* article likely to make it harder for an IT department to do its job."

■ But what needs to be recognized here is that *Computerworld* is, first and foremost, an online media company.

Other readers expressed similar views. "I thought that *Computerworld* was [supposed] to make administrators' jobs easier and that we'd be more informed," one wrote. "What this article spouts are ways to get around the very systems and people the publication is targeted towards."

"Do the editors read these comments?" another reader asked. "It seems rather overwhelming so far that readers are unhappy with the direction this article took on this issue. Will there be some kind of official response from *Computerworld*?"

Yes. But first, let me offer an observation. This article was the top-read story on our site the day it was posted, and it reached No. 4 the next day. It sparked a lively, well-informed, well-articulated discussion. At this writing, it has drawn 42 reader comments and 107 recommendations.

Those numbers tell me that online readers had a great deal of interest in this story. The interest of some of them no doubt lay in a desire to beat the system at work. Others suggested that the solution to employee monitoring is, as one reader put it, to "just work at work instead of stealing time and resources." Still others found that the story provided needed ammunition: "Articles like this, especially if you're in the IT industry, should almost be embraced," one reader wrote. "Add this kind of thing to your arsenal for detection of people going outside company policy, rather than whining that it's not something that should be written."

So here's my official response: When we've engaged our readers as effectively as this story has, we've done our job. ■

Don Tennant *is editor in chief of* Computerworld. *Contact him at don_tennant@computerworld.com.*



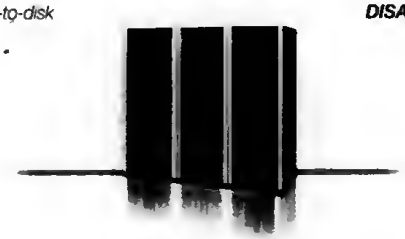
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■ LETTERS

Congrats From a Former Skeptic

Back in the '70s, I was a photographer working for a suburban Boston daily called *The Middlesex News*, located on Cochituate Road in Framingham. In the summer of '78, I believe it was, we got word that we would be moving to newer, bigger digs on the west side of town. Shortly after the move, we learned that our old headquarters was being taken over by a weekly tabloid that thought it could survive by covering nothing but computers. What a laugh!

Congrats on your 40th [July 9], and my thanks for becoming and remaining the best source of quality technology journalism in the business.

■ **Ric Getter,** *writer and consultant, Portland, Ore.*

Who Was First?

In the article "10 People in IT Who Mattered Over the Past 40 Years (but You May Not Know Why)" in *Computerworld*'s 40th anniversary issue [July 9], you stated that John Cullinane created the packaged software market and that his company, Cullinet, was the first "pure software company" to go public. If by software you mean programming and systems design, as well as packaged software, you will find that Cullinet was preceded by Computer Usage Company, Applied Data Research, National Computer Analysts, Informatics, CEIR and a great many others.

■ **Irving Schechtman,** *Huntingdon Valley, Pa.*

You wrote that John Cullinane and his company, Cullinet Software Inc., was the "creator of the packaged software market." Not even close to the truth, as John Cullinane will surely confirm. Applied Data Research was the first company to market a software product, with its Autoflow in 1965. It was followed by several other companies marketing software products, well before Cullinane formed his services company in 1968.

■ **Martin Goetz,** *Teaneck, N.J.*

COMPUTERWORLD.COM



Colleges Grapple With Summertime IT Projects

While students are on break, one school is implementing a communications system for use in emergencies like the Virginia Tech shootings, and another is shying away from Vista and converting to the Macintosh platform.
computerworld.com/networking

Data Center Web Sites to Know

We asked several IT staffers where they go online for deep technical info; among the sites they named is a user-generated community that offers help with event notifications.
computerworld.com/servers

How I Aced the Interview

IT pros who have survived a rough round of questioning share their stories.
computerworld.com/careers

Is 'N' Ready for the Enterprise?

The most recent draft specification for 802.11n wireless networking is faster and better than current technology, but observers aren't sure companies are ready to accept it.
computerworld.com/mobilewireless

Review: Dumping Microsoft Office for An Alternative Suite



There are strong alternatives for both Mac and Windows – even if you need Office compatibility.
computerworld.com/software

What's the Best Broadband ISP?

We asked *Computerworld* readers to rate their high-speed Internet providers on connection reliability, speed, customer service and more. The votes are in, and one service stands head and shoulders above the rest.
computerworld.com/networking

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News Digest

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THE WEEK AHEAD

MONDAY: Sun Microsystems is scheduled to report its financial results for the latest quarter, followed by EDS on Wednesday.

WEDNESDAY: The two-day "briefings" portion of the Black Hat USA 2007 conference will begin in Las Vegas, following four days of security training sessions.

FRIDAY: Defcon 15, a conference for hackers, will pick up where the Black Hat briefings end and run through Sunday.



COURTESY DUKE UNIVERSITY

SECURITY

Duke's WLAN Woes Lead to Cisco Patch

DUKE UNIVERSITY now says that widely publicized problems with its campuswide wireless network that were initially blamed on Apple Inc.'s iPhone have instead been traced to a flaw in Cisco Systems Inc.'s networking equipment.

And last Tuesday, after Cisco released a patch for the software that runs some of its wireless LAN controllers, the company acknowledged that the fix resulted from its investigation of the wireless access point failures on Duke's network.

According to Cisco, the software's handling of Address Resolution Protocol traffic was flawed. Wi-Fi devices use ARP when they're roaming between access points. But Cisco said the glitch could lead to "an ARP storm," in which two or more WLAN controllers flood a network by passing massive amounts of requests back and forth.

That's exactly what happened at Durham, N.C.-based Duke (pictured above), where about 30 Cisco-managed access points were failing under loads of as many as 10,000 ARP requests per second, according to a story published July 18 by *Network World*, a sister publication of *Computerworld*.

At first, Duke officials blamed the iPhone, which was being used by about 150 people on campus. IT administrators at the school thought that the device's built-in Wi-Fi adapters were pinging the hot spots with thousands of address requests each second.

But on July 20, Duke CIO Tracy Futhey posted a note on the university's Web site that fingered an unspecified Cisco "network issue" for what she described as "some minor and temporary disruptions in service."

Futhey added that there had been no recurrences of the network problems since Duke had installed a fix provided by Cisco.

Duke, Cisco and Apple have all remained mum on how the iPhone was involved, if at all. But Cisco's advisory about the software flaw hints that the iPhones being used at Duke may have innocently triggered the ARP storm. The Apple device constantly scans for available access points unless its Wi-Fi feature is turned off.

The flaw itself isn't innocent, though. Cisco warned that it could be used to cause denial-of-service attacks on networks.

— Gregg Keizer

DATA CENTER

ITIL Group Gets 'Clear Evidence' of Vote Fraud

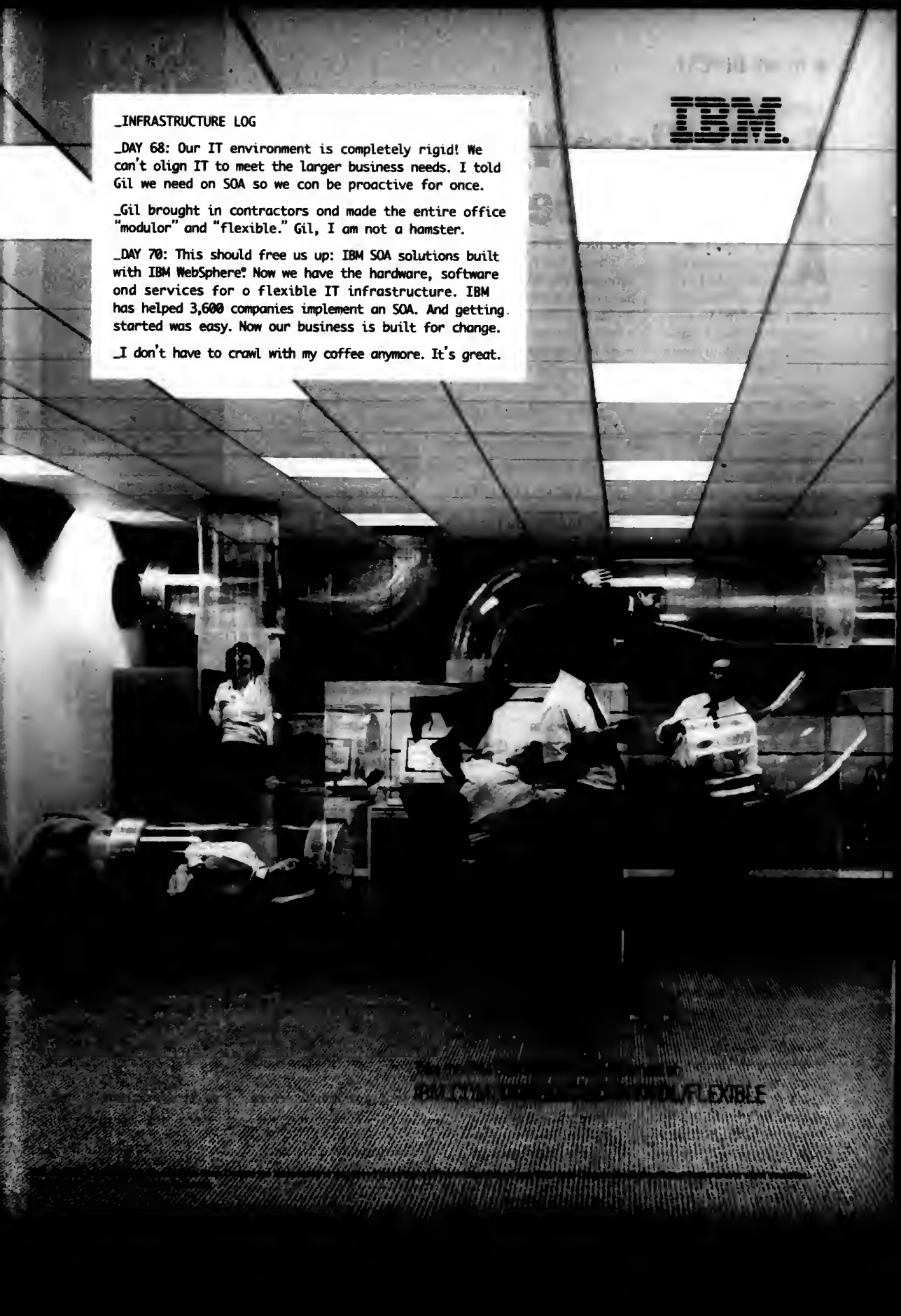
AT LEAST 13 fraudulent votes were cast in an online election held last fall by the IT Service Management Forum's U.S. chapter, according to a preliminary finding by consulting firm Kroll Inc.

Leah Palmer, president of the ITSMF USA, said the Pasadena, Calif.-based backer of the IT Infrastructure Library standards now has "clear evidence" of improper activities during the election, which filled five seats on its board of directors.

About 500 votes were recorded during the October election. For now, ITSMF USA officials don't think there were enough illegitimate ones to change the results. But Palmer said the group may decide to hold a new election even if Kroll's final report determines that the outcome wasn't affected. "That's still something we're considering," she said.

– PATRICK THIBODEAU




IBM.
_INFRASTRUCTURE LOG
_DAY 68: Our IT environment is completely rigid! We can't olign IT to meet the larger business needs. I told Gil we need on SOA so we con be proactive for once.
_Gil brought in contractors ond made the entire office "modulor" and "flexible." Gil, I am not a hamster.
_DAY 70: This should free us up: IBM SOA solutions built with IBM WebSphere® Now we have the hardware, software ond services for o flexible IT infrastructure. IBM has helped 3,600 companies implement an SOA. And getting started was easy. Now our business is built for change.
_I don't have to crawl with my coffee anymore. It's great.

GOVERNMENT

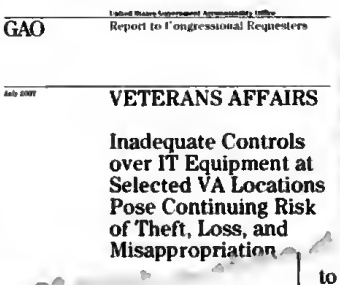
Audit Slaps VA On Lost IT Gear

AN AUDIT of three medical centers operated by the U.S. Department of Veterans Affairs and of the VA's headquarters found that a total of $6.4 million worth of IT equipment was recorded as missing or misplaced during the federal government's past two fiscal years.

In all, about 2,400 IT devices couldn't be accounted for during inventory counts conducted by officials at the four facilities in fiscal 2005 and 2006, according to a report released last week by the Government Accountability Office.

The audit was a follow-up to an earlier one at five other VA facilities. Based on updated information obtained from those locations earlier this year, they couldn't account for more than 8,600 pieces of IT equipment that cost a combined total of $13.2 million, the GAO said.

It noted that because inventory records haven't been consistently updated, it's impossible to determine whether the missing equipment fell through the VA's record-keeping cracks or actually was lost, stolen or misappropriated.


GAO

Report to Congressional Requesters

July 2007

VETERANS AFFAIRS

Inadequate Controls over IT Equipment at Selected VA Locations Pose Continuing Risk of Theft, Loss, and Misappropriation

But in the report and at a congressional hearing held in Washington last week, GAO officials asserted that the VA's inventory control weaknesses are putting IT equipment at risk of being lost or stolen and posing a security risk to the personal data of military veterans.

McCoy Williams, director of financial management and assurance at the GAO, said at the hearing that there is an "overall lack of accountability" for IT equipment among employees at the audited VA facilities. "Missing IT items were not reported for several months, and in some cases, for several years," Williams told the oversight and investigations subcommittee of the House Committee on Veterans' Affairs.

In response, Robert Howard, the VA's CIO, said that the agency is implementing new IT equipment management procedures and that after a three-month search, it has found about 90% of the missing gear.

"You shouldn't have to go through that to find your equipment. The lack of accountability was clearly evident," said Howard, who became CIO last September. He said the agency is also deploying network monitoring software that can scan for specific devices to pinpoint their locations.

— Grant Gross, IDG News Service

Short Takes

The E[illegible] of antitrust violations, charging that the company had abused its microprocessor dominance to the detriment of [illegible] Intel, which has 10 weeks to file a response, contended that the microprocessor market is functioning "normally" and that its actions in Europe have benefited customers.

Open-source vendor Mozilla Corp. acknowledged that its Firefox browser has the same security flaw that it had insisted was unique to Microsoft Corp.'s Internet Explorer during a ruckus that began two weeks ago over responsibility for a zero-day bug.

CORRECTION

In a profile of project management consultant Tyrone Howard that ran in the "40 Under 40" section of the July 9 issue, DeVry University's Keller Graduate School of Management was mistakenly identified as being part of the University of Phoenix. Howard has taught at both institutions.

OVERSIGHT

GAO: Treasury Dept. Needs More Eyes on IT

One out of every four dollars spent by the U.S. Department of the Treasury goes to IT. But the agency's management of its $2.8 billion IT budget has "significant weaknesses," according to a report by the Government Accountability Office.

In particular, the GAO cited a need to improve coordination between the agency's IT and business managers on proposed technology investments.

The GAO looked at the Treasury Department through the lens of the Information Technology Investment Management framework, a five-stage "maturity model" that the GAO created for use by federal agencies.



The Treasury Department is somewhere between Stages 2 and 3 of ITIM, having completed some of the process requirements for both of those levels, the GAO said. For instance, the agency recently implemented a process designed to help it identify IT projects that should receive additional oversight.

But it still needs to establish an investment review board, with executives from IT and its operating units, to make the final decisions on proposed IT projects, the GAO said.

David Powner, the GAO's director of IT management issues, said he isn't aware of any federal agencies that have reached Stage 5 of the ITIM model. If an organization gets to Stage 3, he said, "they are fairly mature at that point."

– PATRICK THIBODEAU

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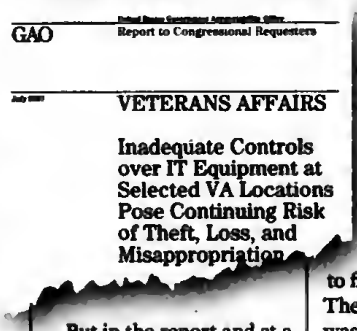
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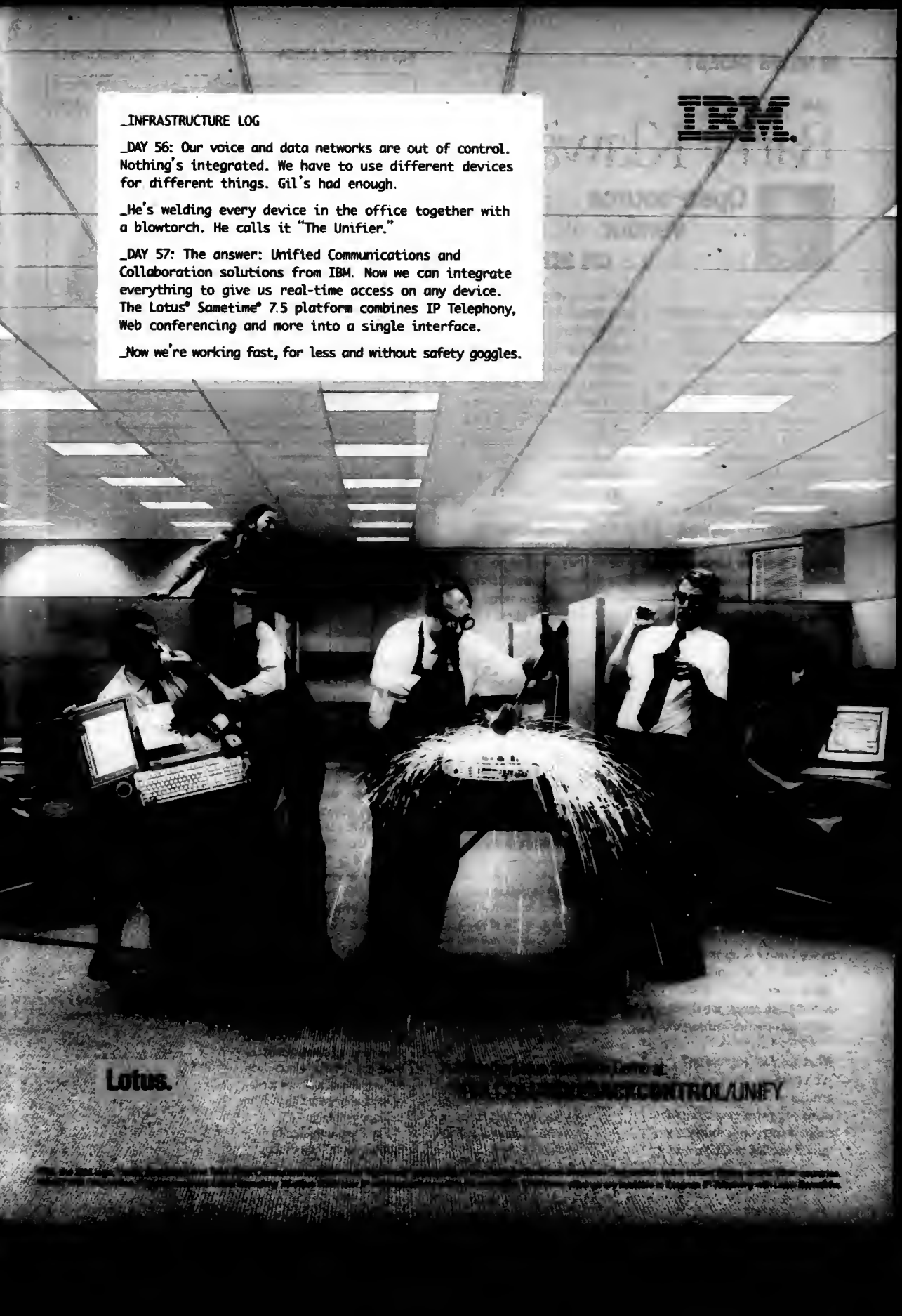


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– PATRICK THIBODEAU


IBM.
_INFRASTRUCTURE LOG
_DAY 56: Our voice and data networks are out of control. Nothing's integrated. We have to use different devices for different things. Gil's had enough.
_He's welding every device in the office together with a blowtorch. He calls it "The Unifier."
_DAY 57: The answer: Unified Communications and Collaboration solutions from IBM. Now we can integrate everything to give us real-time access on any device. The Lotus® Sametime® 7.5 platform combines IP Telephony, Web conferencing and more into a single interface.
_Now we're working fast, for less and without safety goggles.
Lotus.
CONTROL/UNIFY

Q&A

Barry Klawans



Open-source exec says new vendor alliance puts focus on apps

PORTLAND, ORE.

The Open Solutions Alliance, which was formed in February, is looking to help open-source application vendors better integrate their products and improve their visibility among corporate users. Barry Klawans, an OSA board member and chief technology officer at JasperSoft Corp., spoke with Computerworld *at the O'Reilly Open Source Convention here last week.*

With all the other Linux and open-source advocacy groups already in existence, why launch the OSA? We looked around at the other consortiums out there; we didn't want to create another foundation just because we thought it was fun. But they were all aimed at advocating for Linux or infrastructure [tools]. No one was advocating for [vendors] that were looking to build applications for the business world.

Why aren't bigger open-source names like Red Hat, Novell and MySQL in your group? We've talked to all the obvious people who are missing. Companies like MySQL are wanting to see business applications succeed, but it's not their main focus. I think as we accomplish more, we'll see more companies joining us.

What are you working on? We've set up three working groups to address areas we think are problems. One of them is interoperability. I've talked to a lot of CIOs, and it has been a very eye-opening experience. When I ask them why they aren't using open source, they say it's due to a number of technical reasons, such as they can't connect it to their financial software [or] databases. They're finding that classic open source doesn't always play well with others.

The other message I heard, loud and clear, was that when they change a database connection somewhere, they need to go to four different configuration files and make the same change. It drives them nuts.

— *Interview by Todd R. Weiss*

BETWEEN THE LINES *By John Klossner*



said it sold and shipped 270,000 iPhones on the first two days the device was on sale — nearly twice the number of phones that wireless network partner AT&T Inc. has said were activated on those days

set up an Internet Services Research

Center to speed up its development of online search and advertising technologies

The Sarbanes-Oxley Act, which set new financial reporting rules that have forced major IT changes at companies, was signed by President George W. Bush

Global Dispatches

China, FBI Bust Alleged Pirates

LOS ANGELES - A flurry of raids and arrests made in China over a two-week period have broken up what may have been the largest software piracy syndicate in the world, according to FBI officials.

The alleged piracy ring is accused of making fake copies of Microsoft Corp. and Symantec Corp. software, the FBI said. It added that about 290,000 disks with an estimated retail value of $500 million were seized in China, while another $2 million worth of software was confiscated in the U.S.

"We've never really seen a case this big," said David Finn, an associate general counsel at Microsoft.

The software vendor's controversial Windows Genuine Advantage (WGA) antipiracy tool played a role in the investigation, which was conducted jointly by the FBI and China's Ministry of Public Security. Microsoft said more than 1,000 users whose copies of Windows XP were flagged as invalid by the WGA tool submitted disks that were linked back to the alleged syndicate.
Jeremy Kirk,
IDG News Service

Infosys Gets BPO Sites From Philips

BANGALORE, INDIA - Infosys Technologies Ltd. has won a seven-year, $250 million business process outsourcing contract from Philips Electronics NV, which will also sell three of its shared-services delivery centers to Infosys.

The Bangalore-based outsourcer will pay Philips $28 million for the services centers in India, Thailand and Poland. As part of the deal, about 1,400 jobs at Amsterdam-based Philips will be shifted to Infosys.

The outsourcing vendor said it hopes to sign similar deals with other firms in Europe.
John Ribeiro,
IDG News Service

BRIEFLY NOTED

Lenovo Group Ltd. said it plans to spend $30 million to build new PC manufacturing and order-fulfillment plants in Mexico and India. The Mexican facility is slated to open by mid-2008 and will supply PCs to customers in the Americas.
Jeremy Kirk,
IDG News Service



_INFRASTRUCTURE LOG

_DAY 78: Our energy costs are staggering! We're spending more to power and cool the hardware than we did to buy it in the first place.

_It's too darn hot. Gil moved the entire data center to the Arctic Circle. Gil, this commute is ridiculous.

_DAY 81: Here's something better: IBM energy management solutions. IBM services helped us identify and tackle our power and cooling inefficiencies. The IBM System z™ server's high utilization and unique design mean we're not feeding our old, power-hungry environment.

_Gil doesn't want to hear it. He says he's snow deaf.





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Brian Boyko, the corporate blogger at NetQoS, has written posts about topics such as the Interplanetary Internet and a pornography case in Connecticut

WILL VAN OVERBEEK

Corporate Blogs Take On an Edge

Companies take a new marketing tack: letting their bloggers discuss a range of topics. **By Heather Havenstein**

■ WEB 2.0

NETQoS INC. is a vendor of network performance management software. But you'd be hard-pressed to figure that out from some of the online posts written by Brian Boyko, the Austin-based company's designated corporate blogger.

In April, for example, a Boyko post about the Interplanetary Internet project — which is designed to extend the Net into outer space — prompted Internet luminary Vinton Cerf to post a comment on NetworkPerformanceDaily.com, the NetQoS blog.

And over the course of several months this year, the blog gained national attention after Boyko posted multiple entries about the case of a Connecticut school teacher whom a jury convicted on charges of risking injury to a minor for allegedly exposing students to pornographic images that appeared on a classroom computer.

Boyko said he wrote about that case because the incident called the school's IT network management processes into question. The verdict was later overturned after the defense presented evidence that the PC was infested with spyware. "A lot of people believe from our coverage it was very clear that one side had a lot better case than the other," he said. "That pressure helped with her conviction being overturned."

Companies such as NetQoS, which launched its blog nine months ago, are eschewing Corporate Blogging 1.0 tactics that often result in blogs being used merely to post static marketing materials as an extension of companies' Web sites.

Now, a growing number of businesses are opening up their blogs to provide an outlet for the same kind of uncensored commentary and interaction that have made personal blogs such a popular medium on the Web.

At such companies, executives or full-time in-house bloggers like Boyko are writing posts. Although the goal is still to raise the profile of a company, the new-style blogs often tackle unconventional topics that may not have an obvious effect on businesses' bottom lines.

For example, Pitney Bowes Inc. in June launched its first blog, featuring posts written by Mike Critelli, its ex-

Continued on page 16



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Continued from page 14

ecutive chairman. Critelli has tackled topics such as public funding for research on Alzheimer's disease.

Blogs like Critelli's require companies to turn conventional marketing wisdom on its head by investing time, effort and money without the promise of a tangible return on investment, according to executives at organizations that are undertaking such efforts.

They also noted that to be successful, blogs should be anchored by a genuine voice and offer readers content that is free of "marketingspeak."

SmugMug Inc., a Mountain View, Calif.-based company that operates an online photo-sharing site, began its corporate blog about two years ago as a "blah, blah, blah blog [that said], 'Our company is great and here's why,' " noted co-founder and President Chris MacAskill. But the first blog didn't generate much readership, he said.

That all changed last year when Don MacAskill, Chris's son and the company's CEO and "chief geek," posted a scathing review of how Sun Microsystems Inc.'s Sun Fire T1000 servers were performing in SmugMug's data center.

The post made the front page of news aggregation Web site Digg.com. "The next thing we knew, our phone was ringing off the hook from senior Sun vice presidents," Chris MacAskill said. He added that Don MacAskill later met with Sun CEO Jonathan Schwartz — a prominent blogger himself — to discuss the Sun Fire servers, after which he helped Sun fix the performance problem he had cited and then ordered several new pieces of Sun hardware for SmugMug.

From that point on, both MacAskills have continued to blog about issues they think will engage readers, such as the differences in how the colors of photos appear on Windows PCs vs. Macintosh systems. Readership of the blog has increased by a factor of 1,000, according to the elder MacAskill.

Many outsiders are "just astonished" that the SmugMug executives are so open in the blog, Chris MacAskill said. But that approach "raises the profile of the company," he added.

Blogs like SmugMug's are still "marketing in disguise," Chris MacAskill acknowledged. "But you have to go into it [with the notion] that it is not marketing [in order] for the marketing to work. If we were to blog about the latest feature on SmugMug, everybody's eyes would glaze over."

Steve Harriman, vice president of marketing at NetQoS, agreed on that point. Although NetQoS can track how many readers of its blog request product demonstrations, "it is a mistake to go into corporate blogging thinking it is about marketing and demand-generation," Harriman said.

At New Day Trust Mortgage in Irvine, Calif., the firm's year-old corporate blog isn't viewed as a hard sales tool, said Morgan Brown, the residential mortgage lender's chief operating officer. Instead, the blog is aimed at establishing New Day Trust as a knowledgeable and trustworthy voice within the mortgage industry, said Brown, who now devotes about three hours daily to writing the blog.

He noted, for example, that posts in the blog have been very upfront about the recent black eye that the mortgage industry has received over the increase in defaults as a result of loans being made to borrowers who may not have been financially qualified.

The company also points prospective customers to the blog to help them choose between New Day Trust and its competitors, Brown said. In addition, the blog has helped the lender increase the network of real estate agents who work with it, according to Brown.

Rand Fishkin, CEO of SEOmoz.org, a Seattle-based Internet marketing company that helps its clients develop blogging initiatives, said that a blog can be a good way for a corporation to make itself more "humanlike." But, he added, companies shouldn't even attempt to blog if their public relations and legal teams don't agree to allow a genuine voice to be represented.

"It has to be a realistic discussion about industry trends and issues that are important, potentially even issues that are antagonistic or troublesome," Fishkin said. Otherwise, "you look even more ridiculous than if you never attempted it." ■

CORPORATE BLOGGING 101

Experienced blog authors offer the following tips on managing the blogging process within companies:

- **Develop internal policies about what can and cannot be discussed on corporate blogs.**
- **Have prospective bloggers read existing blogs to get a feel for a good "voice" to use in their posts.**
- **Make sure corporate bloggers are writing their own entries.**
- **Avoid editing blogs as much as possible to ensure that the voice of the author comes through.**
- **Try to maintain a two-way flow of information by deleting only obvious spam in the comments section.**
- **House blogs on your corporate Web site, not on third-party sites.**
- **Encourage authors to blog frequently and to link to other sources as often as possible.**
- **Use the spam filters that are available in most blogging software.**

BLOGGING CAN OPEN INSIDE LINES

IN ADDITION to trying to raise their external visibility via blogging, some companies are using blogs on their corporate intranets to try to communicate more effectively with employees and business partners.

For example, Keith Gerson, PuroSystems Inc.'s president and chief operating officer, launched a blog on its intranet eight months ago – soon after he joined the Tamarac, Fla., company, which offers emergency restoration services to insurers and property owners.

"The blog seemed like it was an important way to come in where people didn't know me [and] be able to start working on credibility and trust," Gerson said. "It was a way for me to share my vision."

Gerson also has used the blog to communicate with the company's 160 franchisees about the philosophy behind a new marketing fund they were being asked to help pay for.

"It gave me the unfettered opportunity to paint a portrait for them of what that fund could do for us," he said. "There was little margin for misunderstanding or miscommunication."

– HEATHER HAVENSTEIN



Information Management

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« VFrame DC could help technicians in First American's IT service center manage systems in the company's data center.

■ INFRASTRUCTURE MANAGEMENT

Cisco Looks to Put Virtual Stamp On Data Centers

Networking vendor adds software for managing system resources as virtualized services. By Matt Hamblen

ANAHEIM, CALIF.

TRYING TO become more of a force in the data center management market, Cisco Systems Inc. last week announced software that it said can be used to pool computing, networking and storage resources as a set of virtualized services.

The VFrame Data Center technology is designed to increase server utilization rates, reduce application deployment times and make it easier for IT workers to provision, reconfigure and troubleshoot systems. Several attendees at the Networkers at Cisco Live 2007 user conference said the promised benefits hit home with them, although some noted that adopting VFrame DC may not be a simple matter.

For example, Evan Jafa, chief technology officer at The First American Corp. in Santa Ana, Calif., said that technologies such as VFrame DC hold promise for workers in large data centers. But, he added, they also pose management and organizational hurdles for companies like First American, an $8.5 billion firm that processes credit reports and offers a variety of other information and business services.

"Virtualization sounds wonderful, except there are a couple of challenges that need to be addressed before it is a totally valid concept," Jafa noted. For example, he said that in trying to develop "a vision into the virtual world" at First American, he has had to bring together the managers in charge of different IT silos, such as LANs and application management, to work as a team.

Jayshree Ullal, senior vice president of Cisco's data center, switching and security technology group, agreed that the required changes may be difficult for some organizations. In anticipation of that, Cisco has assigned a group of data center "practitioners" to work with users as advisers on the process, she said.

Panalpina World Transport Ltd. is trying to drive usage of its servers' processing capacity above 20% as part of a data center consolidation project, said Armin Heinlein, a corporate vice president at the shipping company's North American operations in Redwood Shores, Calif.

Until now, "every manager has said he needed a new server for each new application," Heinlein said. But in the consolidated environment, he added, virtualization will be a necessity.

Stephen Moore, head of global services at The Regus Group PLC in Chertsey, England, said VFrame DC could make it easier to manage the IT equipment at the 950 business centers that his company operates globally.

Regus provides furnished and staffed office space as well as meeting rooms, training facilities and a network infrastructure that was supplied mostly by Cisco. Administering systems across the facilities "is painful [and] fragmented," Moore said, adding that the promise of centralized IT management is "a huge incentive" for him to consider VFrame DC.

The software is due next month as part of a packaged appliance that starts at $60,000. Zeus Kerravala, an analyst at Yankee Group Research Inc. in Boston, said that from Cisco's perspective, the VFrame DC offering makes the vendor "more IT-relevant, rather than just network-relevant."

Forrester Research Inc. analyst James Staten said in a blog post that VFrame "isn't a breakthrough" because existing tools from smaller vendors offer similar capabilities. "But what makes this product different," Staten wrote, "is the brand name behind it." ■



"Virtualization sounds wonderful, except there are a couple of challenges that need to be addressed before it is a totally valid concept."

EVAN JAFA, CTO, THE FIRST AMERICAN CORP.

On the Mark

HOT TRENDS ■ NEW PRODUCT NEWS ■ INDUSTRY BUZZ BY MARK HALL



MATTHEW FAULKNER

Shift to Web Has Just Begun

EVEN THOUGH Web content is being squeezed in between bigger, bolder and, frankly, more annoying online advertising, only 6% of ad dollars go to Internet sites, according to Forrester Research Inc. But as people continue to increase their Web time vs. other media, more ads will shift to Web sites. Matt Langie, director of product marketing at WebTrends Inc. in Portland, Ore., says the trick for Web marketers is to get the biggest bang for their buck.

34%
Online portion of people's total time spent with all media types, on average, says Forrester.

To help, WebTrends this week will release its Marketing Lab 2 (ML2) analytic software, which it says will let marketers target unique visitors with their products and services more effectively. New in ML2 is WebTrends Score, which measures clickstream behavior and ties it to specific marketing offers. Pricing is based on visitor activity.

But Can the Net Take the Load?

Not so fast, say Larry Irving and Bruce Mehlman. The co-chairmen of the Internet Innovation Alliance in Washington are concerned that the Internet's increased popularity is beginning to put pressure on its infrastructure. Irving points to some disturbing trends. He says that five years ago, 50% of fiber-optic cable in the U.S. was dark. Today, it's only 30%, despite the douhling of capacity in that time. Both men say that video is the killer app online and that no one anticipated the success of services like YouTube or the move to hroadcasting major sporting events online. Mehlman worries that policymakers believe that an "immaculate conception" technology will emerge to save the day. Although WiMax and broadband over power lines might bolster the Internet's infrastructure, they aren't silver bullets, says Irving. Mehlman argues that telecommunications and cable companies need restructured taxes and a more competitive climate to induce them to step up their infrastructure investments, or YouTube and its ilk might go down the tubes.



The Internet's infrastructure is at risk, says Bruce Mehlman.

Ubuntu Live: Dog Pile on Microsoft

Ubuntu is revered among Linux devotees as a desktop operating system. And Mark Shuttleworth, founder of London-based Canonical Ltd., the lead developer of Ubuntu, told the audience at the Ubuntu Live conference in Portland last week that the company will focus on server improvements in the coming year to make it more appealing to IT managers. Canonical will also place Ubuntu in more direct competition with other Linux versions, such as Red Hat and SUSE. But if you were at the conference, you'd have been hard-pressed to find a single critical peep about other Linux distributions or even prideful remarks about why Ubuntu is the best operating system. Rather, you could liken the situation to the Protestant Reformation of the 16th century, with Windows representing Catholicism, Microsoft the pope, and all the rebel Linux denominations in agreement that both are evil to the core. Among the endless stream of barbs tossed Microsoft's way: Stephen O'Grady, an analyst at Denver-based RedMonk, showed a slide during his keynote that described Windows as a "bug" that IT needs to fix. And Eben Moglen, president of the Software Freedom Law Center in New York, may have had Microsoft in mind when he said Linux is facing "attacks by those who don't believe what we believe." But as IT shops continue to embrace Linux, this united front will surely crack, as the different vendors strive to position their distributions as the best in order to win lucrative service deals. After all, history shows that the Protestants eventually went to war with one another. ■

<1%
Linux desktop market share, according to Gartner Inc.



PHOTOS BY TIMOTHY ARCHIBALD

Dossier

Name: Vinton G. Cerf

Title: Vice president and chief Internet evangelist

Organization: Google Inc.

Location: Herndon, Va.

Favorite nonwork pastime: Reading

Most interesting thing people don't know about him: "I used to play the cello. I was invited to attend a master class led by Pau Casals. I was 15."

Philosophy in a nutshell: "You can learn something from everyone; optimism is better than pessimism; most people rise to your level of expectation."

Favorite vice: Häagen-Dazs coffee ice cream

Dream dinner table guests: "Bill and Hillary Clinton; Eric Lander of the Whitehead Institute and his wife; geneticist Richard Dawkins, one of the most outspoken Darwinists in our contemporary period; and of course, Sigrid [Cerf's wife]."

■ THE GRILL

Vint Cerf

Google's chief Internet evangelist talks about the sorry state of **online security**, his hopes for **deep space communication** and using IT to find **saffron** in the wilderness.

***Vint Cerf** is the co-designer with Robert Kahn of the TCP/IP protocols and the basic architecture of the Internet. In 2005, he and Kahn received the highest civilian honor bestowed in the U.S., the Presidential Medal of Freedom.*

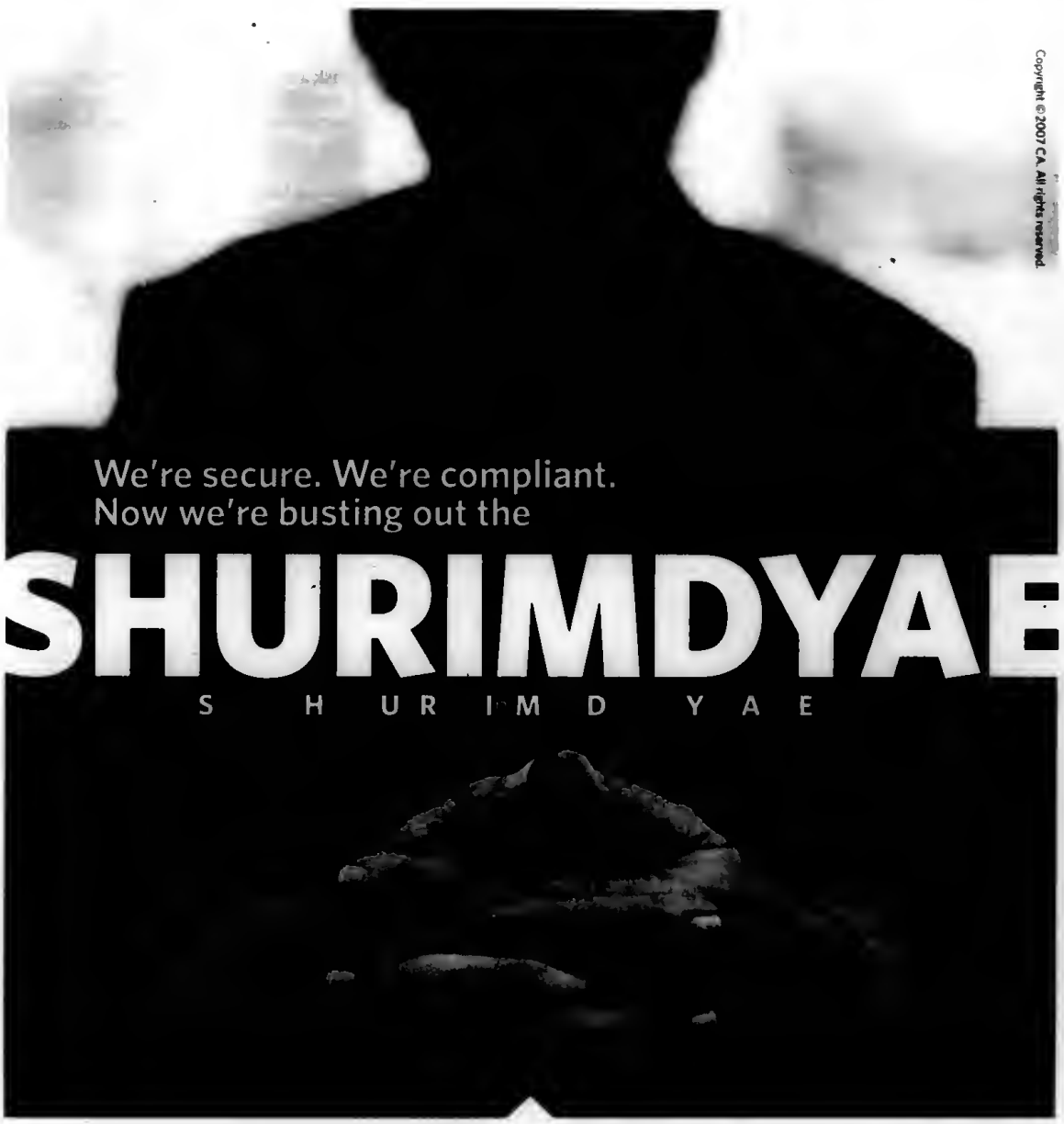
As one of the founding fathers of the Internet, what about your creation makes you most proud? It's the commercialization of the network that has given it its greatest character. Otherwise, it would be academic and military.

The commercial incarnation didn't really happen until 1989, which makes the Internet 18 years old. It's had an awkward [adolescence]. It still isn't quite clear how it's going to fit into the world. It's boundaryless in many respects, so both good things and bad things manifest. I'm very impressed by the quantity and quality of content on the Net, [but] there's some pretty bad content as well.

How do you use the Internet? My per-

Continued on page 22

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Congratulations. Your IT security is working hard. But there's something more it should do (besides the protection, compliance, access, etc.). IT security should actually make your business more efficient. More flexible. More competitive. CA can help. Our Security Management centralizes your identity and access management to turn IT security into a proactive, business-building tool. So your security strengthens customer relationships, grows partnerships and helps your enterprise address changing markets with ninja-like agility. All with CA's best-in-class modularity, scalability and integration. But don't just take our acronym for it. Download the white paper, "Security Management: Aligning Security with Business Opportunities," at **ca.com/secure**.

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"Internet security is really not in great shape right now. There are many avenues of attack available to people who want to cause trouble.

Continued from page 20

sonal use of the Internet is heavily oriented toward finding information, and I'm just astonished by the information available.

I was on vacation driving around in Utah and Arizona in remote places. We were planning to prepare some paella and needed saffron. We were out in the middle of nowhere, but I was picking up a good, strong signal on my BlackBerry. I went online and got a list of stores. We called using the mobile [phone]. Five minutes after going online and finding a store and phoning, I bought $13 worth of saffron. I thought, "By God! I can't believe what we just did!"

How has the Internet affected mobility and vice versa? If you know you'll have access wherever you go, you change some of your habits. I'm an avid laptop user, and I just spent two weeks without my laptop. I've certainly not been without a computer for that [length of] time [before]. I had only my BlackBerry, and I survived.

I'm beginning to think that some of the stories in *Star Trek* about these giant galactic databases containing millions of years of knowledge were sort of on the dim threshold of how to take advantage of information in machine-processable form. But there's a big technical issue that has me worried.

What's that? The information on the Net is not all simple text. It's structured, whether it's Microsoft Word documents or PDFs. That means the information is only really accessible if you understand how to interpret the bits. What happens when files are there and we don't know how to interpret them anymore?

How would we lose that ability? If you have a CD but the form isn't known anymore. I have 5 1/4-in. diskettes, but nothing to read them. Even 3 1/2-in. diskette readers are becoming hard to come by. The physical source media change. We may lose the ability to read them. People forget what they stored on the Net. We can't necessarily guarantee people will upgrade instances of things.

What's your assessment of security on the Internet? Internet security is really not in great shape right now. There are many avenues of attack available to people who want to cause trouble. DNS is the most serious kind, and the bots that carry out those denials of service. It's too easy to compromise laptops because operating system software is vulnerable, and this is true for just about every operating system. The problem isn't just operating system vulnerabilities. If you download a piece of Java code, it may be able to get access to all sorts of critical data on a secure computer. It's that kind of risk and vulnerability that worries me a great deal. If we can't do a great job, people will be less comfortable using the Net and computers.

You've been married to your wife, Sigrid, for more than 40 years. You also have a rich intellectual and professional life. What's your secret to happiness? You'd find my wife, Sigrid, to be extraordinary. It is she who has been very accommodating of my workaholism over the last 40 years. My advice? You should find a Sigrid.

I think the right motivation is to do something you care about and you're good at. If you're not good at something, go find something. When you like something, it doesn't feel like work.

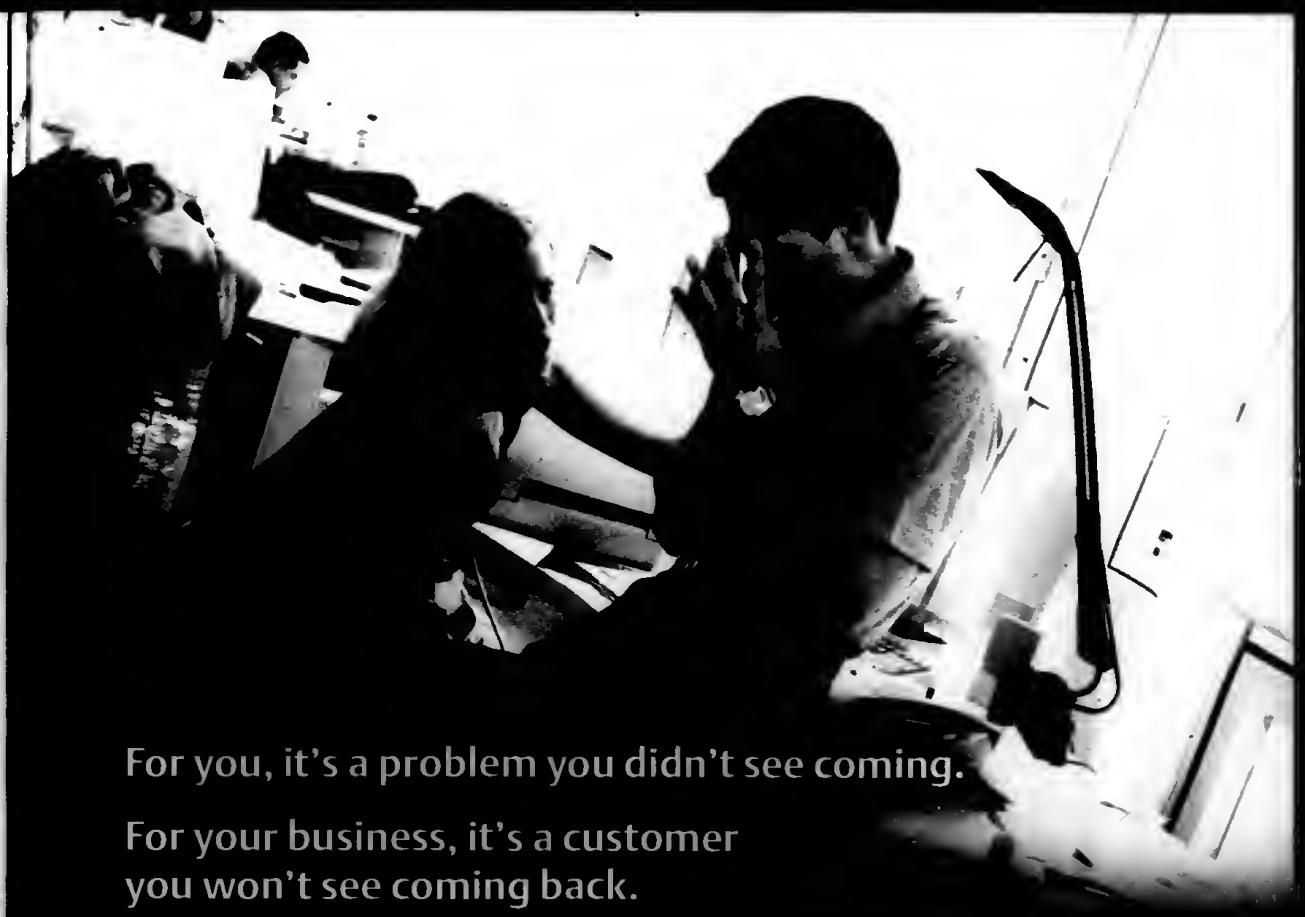
Specifically for young people pursuing careers, software is an endless frontier. There isn't any limit to what you can do. I can confidently argue that maybe only 1% or 2% of the possible applications have already been implemented or thought of.

Where are you with your work on the interplanetary Internet? The interplanetary work was started at [NASA's Jet Propulsion Laboratory] in 1998. We wanted to standardize space communications. We quickly discovered that the basic TCP/IP protocols would work on the surface of a planet or in a spacecraft, but they don't work well when speaking on an interplanetary basis. The space between planets is so big. Between Earth and Mars, it takes 20 minutes one way and 40 minutes round-trip for a radio signal to propagate between planets. Forty minutes is way long.

Delay and disruption [tolerant] networking protocols are implemented and developed. They're available in open source and being tested in near space. In deep space, you have these unavoidable, long speed-of-light delays. Tolerance for uncertain delays that cause disruption is exactly what's needed.

We're hoping to put tests together that will take us to Mars in the next decade. The intention is to standardize protocols so the same thing that allows you to take an arbitrary laptop and plug it in and talk would apply in deep space.

— *Interview by* **Julia King**



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For your business, it's a customer you won't see coming back.

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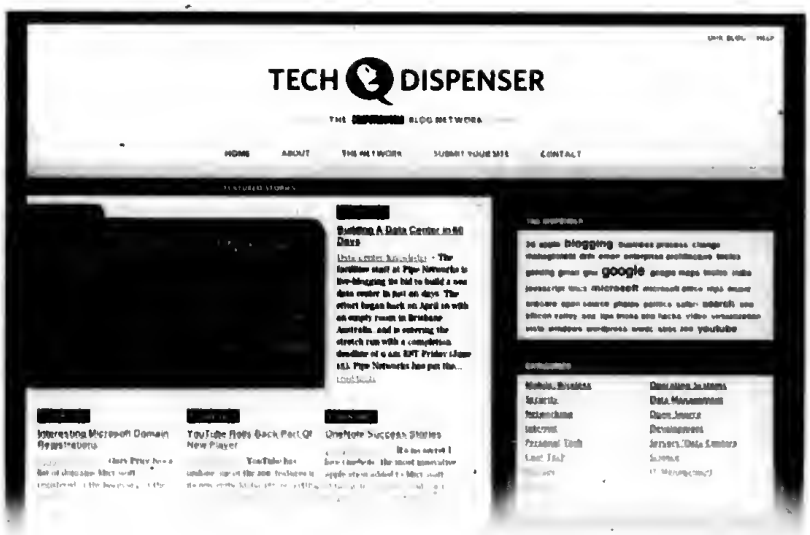
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THE COMPUTERWORLD BLOG NETWORK

■ OPINION

Virginia Robbins

Finding, Keeping The Best Vendors



I RECENTLY FINISHED a project that included 34 vendors, ranging from the best I've worked with to the very worst. So, the questions that have been on my mind are how to go about forming good vendor relationships and how to select the best vendors. Here is what I've learned:

■ **Price alone doesn't matter.** Sometimes I've gone with the most expensive vendor, only to find that my project wasn't big enough to interest its best people. Other times, I've selected the lowest-cost vendor and formed a terrific partnership. You don't always get what you pay for.

■ **References don't matter.** I consistently ask for references and check them, and they're always stellar. You might elicit ways to build a good relationship with the vendor by talking to the references it supplies, but don't expect to hear about the bad and the ugly. No vendor is going to refer you to a customer who wasn't happy. I have never been able to distinguish a great vendor from a so-so vendor by talking to their references, no matter how many questions I ask.

■ **History doesn't matter.** I have contracted with vendors because everyone I talked to raved about a certain member of the staff, only to find out that he wouldn't be assigned to my account. I've signed on because the vendor convinced me that its product is terrific, only to learn that the thing is now manufactured someplace else and doesn't work quite the same. No matter how specific you are in your vendor agreements, you can't always get what you requested. People leave, products are upgraded, and situations change. And a small company like mine often doesn't have the relative power to renegotiate a deal.

So, what does matter?

■ **Business model fit matters.** The closer your needs match those of the vendor's average customer, the easier the relationship will be. Identify that average customer, and then compare its needs to yours. If you have a match higher than 80%, then it's more likely that the vendor can easily meet your needs. My best vendors specialize in my industry and have other customers just like my company. My worst vendors also specialize in my industry, but they have customers that are very different in size, culture, price and delivery.

Spend the time upfront listening to your vendor describe its most successful work, then match those situations with your own. Most salespeople will gloss over the differences; you'll need to call them out, explore those differences and really understand them. Every vendor has a preferred customer — one that fits easily into the vendor's delivery stream. The closer you are to that profile, the easier and cheaper things will be for you.

■ The closer you are to the profile of a vendor's preferred customer, the easier and cheaper things will be for you.

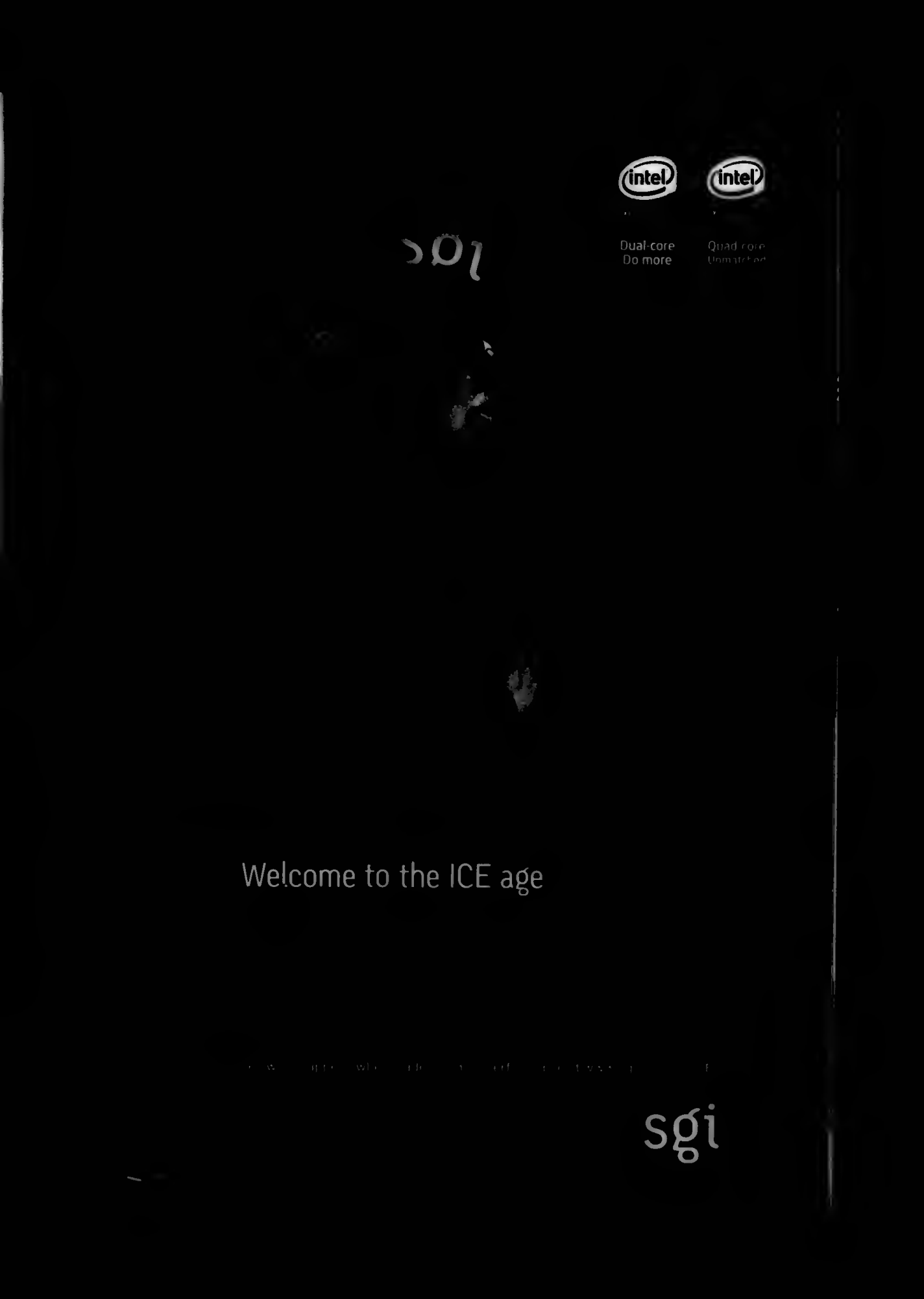
■ **Desire and attitude matter.** The more your vendor wants to do business with you, the more it will be willing to change its processes to fit your needs — and at little cost to you. Sometimes a smaller vendor may be more flexible because it needs your business; other times, a larger vendor is looking to add a customer to its reference list that is just like you.

Once you've found a great vendor, how do you keep it? First and foremost, pay the vendor's invoices before they are due. Does that sound simple? It is, and yet how many unpaid invoices are sitting in your in-box awaiting your attention? If you've got a good vendor now, pay your bill today so you'll still have a good vendor tomorrow.

Second, help your vendor grow its business. Talk to your friends and your co-workers about the relationship you've developed.

Help your vendor help itself, and it will be your vendor for as long as you want. ■

Virginia Robbins *is a former CIO who is currently the chief administrative officer responsible for technology and bank operations at the California Bank of Commerce. You can contact her at vrobbins@sbcglobal.net.*


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Dual-core
Do more
Quad core
Welcome to the ICE age
sgi



DAN PAGE ILLUSTRATION

New steps are needed to attract **entry-level IT** but IT managers are slow to try Web 2.0 tools

THE Recruit/Re

IN MID-MAY, Hewlett-Packard Co. participated in a virtual job fair using Second Life tools from Linden Lab in San Francisco. HP had been invited by one of its external recruiters, TMP Worldwide Advertising & Communications LLC in New York. During the virtual event, recruiters and job applicants alike created avatars, or personas to represent themselves in the virtual world.

At least that's how it was supposed to unfold. Four HP recruiters were slated to spend four hours a day on the site for three consecutive days to interview 40-plus applicants. Fewer than 20 avatars showed up, however.

"Some candidates who didn't show turned out to be inexperienced with [Second Life], didn't have their avatars created in time or weren't interested," says Betty Smith, manager of university recruiting for HP in San Diego. Two of those who did take part warranted follow-up interviews, though HP hasn't extended job offers to either candidate yet, she says.

HP's willingness to step into the Web 2.0 world for recruiting differentiates the company. In *Computerworld*'s latest Vital Signs survey, none of the 233 IT professionals responding reported using Second Life for recruiting. A scant 4% said they used blogs or social networking sites like Facebook to engage potential IT job candidates. And only 15% reported using professional networking sites such as LinkedIn. Moreover, 52% of the respondents said they don't use any Web 2.0 tools for recruiting.

> **If we can find a way to add value, they'll think about HP as a company that thinks about them.**
>
> **BETTY SMITH,** MANAGER OF UNIVERSITY RECRUITING, HEWLETT-PACKARD CO.

It seems that most IT organizations are missing out on a huge opportunity to connect — particularly with the talented twentysomethings who inhabit the virtual world. These Gen Yers are "tribal" and accustomed to the "very collaborative relationships" that Web 2.0 tools enable, says Tom Casey, senior vice president and workforce transformation leader at Kingwood, Texas-based consultancy BSG Concours.

But a few companies do see the potential. The IT leadership team at Quicken Loans Inc., for example, is ahead of the curve. In February, it rolled out a recruiting Web site that includes a blog called "The Diff" (addressing the gap between average and outstanding performance), which employees use to articulate why Quicken Loans is such a great company to work for. One of the chief benefits of the blog (*www.whatsthediff.com*) is that it helps company workers connect with potential employees in a genuine way, says e-commerce marketing director Matt Cardwell.

So far, more than half of the blog posts discuss what's cool about working for the online mortgage lender; the others highlight external people or companies that Quicken Loans employees admire. "It's about connecting people up," says Cardwell.

MIRROR, MIRROR

The use of Web 2.0 tools can help job hunters screen companies and vice versa. It starts with a well-designed Web site that enables potential employees to learn nearly everything about a company, including its ethics and culture — which helps socially conscious job candidates make informed decisions about pursuing IT employment.

Other tools can help companies separate the likely hires from the rest. Wall Homes Inc., an Arlington, Texas-based home builder, typically receives thou-

workers and retain **retirement-age staffers,**
that could help. **By Thomas Hoffman**

tain Shuffle

sands of hits for IT positions it places on recruitment sites like Monster.com, says CIO Andrew Brimberry. So his IT management team takes advantage of professional networking sites such as LinkedIn to locate and screen recruits on the basis of job skills, geography and academic background.

Companies such as HP that venture deeper into the world of Web 2.0 technologies may find themselves disappointed, at least initially. But despite the low turnout the Second Life trial balloon yielded, Smith is not deterred. She says she sees a lot of potential for using Second Life for recruiting. Gen Yers "are so tech-savvy, we think it's a great way to reach out where they're already comfortable," says Smith. "If we can find a way to add value, they'll think about HP as a company that thinks about them."

Of course, Web 2.0 is only one piece of the recruiting puzzle, says Casey. "There is no company I have spoken to that has cracked the DaVinci Code of attraction," he says.

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MATT CARDWELL, E-COMMERCE MARKETING DIRECTOR, QUICKEN LOANS INC., ON THE COMPANY'S BLOG-ASSISTED RECRUITING WEB SITE

And new IT recruits are more difficult to land. In the Vital Signs survey, 27% of respondents said it's tougher to recruit college graduates now than it was two years ago.

Complicating the challenge, some say, is that the current crop of newbies is different from previous generations in several respects. For instance, many twentysomethings are accustomed to receiving a lot of handholding and attaboys, says Adrian Gostick, co-author of *The Carrot Principle* (Free Press, 2007) and a consultant at O.C. Tanner Co., an employee recognition advisory firm in Salt Lake City.

The wants and needs of this new generation can induce managerial headaches for IT leaders who hire the wrong candidates. "We've cut the [IT] workforce down in the last 10 years to make them more efficient," says Neal Ganguly, CIO at CentraState Healthcare System, a Freehold, N.J.-based health care provider with a 32-person IT staff. "One person who is too needy can drag the whole workforce down. We just can't afford that."

Gordon Gregory can relate. The vice president of technology at Mazuma Credit Union in Kansas City, Mo., says the company hired a few younger IT workers in recent years who didn't pan out. "A couple of them were what I'd call 'high maintenance' — they had high egos and needed a lot of attention, and they weren't always adept at working with people and customers," he says.

More than previous generations, today's crop of younger IT workers also values, even expects, flexible work hours. "They want to work when they want to work, but we still need them in at certain hours to work on teams," says M. Lewis Temares, CIO at the University of Miami in Coral Gables, Fla.

To the extent that he can, Temares grants IT staffers flexible hours and equips them with home PCs and BlackBerries so they can do their jobs whenever and wherever they're able. "There's no question you're going to get the returns back on these investments," he says.

And he does. Many younger workers on Temares' 300-person IT staff put in an eight-hour day and then grind out another four hours overnight. In fact, the university now posts notices about server downtime at least a week in advance. "You never know who needs what" during the middle of the night, says Temares.

LOW TECH, HIGH TOUCH

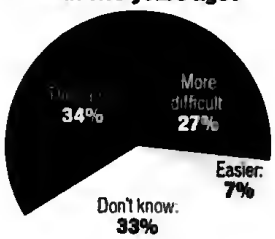
There are also low-tech recruitment techniques that IT executives don't exploit nearly enough. One is piggybacking business trips with visits to colleges, says David Foote, chief research officer at Foote Partners LLC in New Canaan, Conn. Such visits give students a chance to quiz IT leaders about what it's really like to work at a company, says Foote. "It's consistently the best way to hire people out of school."

Tellabs Inc. CIO Jean Holley has used that technique. To help feed an internship program for college graduates with SAP, life-cycle development and broad-based Web skills, Holley and two colleagues visited the University of Missouri – Rolla in March to conduct preliminary interviews with students enrolled in the school's MBA-ERP pro-

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Slow on The

How difficult are you finding recruitment of recent college graduates for IT compared with two years ago?



Are you using any new tools or methods to find and recruit recent college grads for IT?

E-recruiting sites like Monster.com	**32%**
Professional networking sites like LinkedIn, Naymz	15%
Open-source community sites	10%
Blog-searching tools	4%
Social networking sites like MySpace, Facebook	4%
Other	11%
None of the above	52%

(Multiple responses allowed.)

Are you taking any steps to retain IT pros who are nearing traditional retirement age?

Flexible schedules	**19%**
Part-time work options	12%
Contracting retired employees	9%
Increased compensation	9%
Training or professional development programs	9%
Bonuses for staying on	9%
Job sharing	5%
Delayed retirement plans	4%
Other	4%
No steps taken	60%

(Multiple responses allowed.)

Source: *Computerworld* Vital Signs survey of 233 IT professionals, May-June 2007. Not all respondents answered all questions. Percentages may not add up to 100 because of rounding.

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Part-time work	14%
Contracting retired employees	9%
Increased compensation	9%
Training or professional development programs	9%
Mentoring	6%
Job sharing	5%
Phased retirement	5%
Other	4%
Nothing	40%

(Multiple responses allowed.)

Sources: Computerworld/Vital Signs survey of 233 IT professionals, May-June 2007. Not all respondents answered all questions. Percentages may not add up to 100 because of rounding.

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Continued from page 30

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Laura looks at four criteria in job candidates: a cultural fit with Quicken Loans, a desire to learn, the ability to learn and technical skills, in that order.

"We have a saying here," says Laura. " 'You're like a tree: You're either growing or dying.' " ■

The Retirement Rhumba

THOUSANDS of baby boomer IT workers are nearing retirement age and threatening to take decades of valuable insights about proprietary IT operations with them as they leave.

But most IT leaders either aren't paying heed to the warning signs, or they seem to believe that the inevitable is still years away from affecting them or their IT shops. In *Computerworld*'s latest Vital Signs survey, 60% of the 233 respondents said their organizations haven't taken any steps to keep retirement-age IT workers from waltzing out the door.

At Hilton Hotels Corp., "we don't have a looming concern in the next five to seven years" about attrition among the company's 650 IT workers worldwide, says Laurel Bailey, a spokeswoman for the hotel chain's technology group in Memphis. "After that, we may need to start looking at it."

In fact, some companies may see impending retirements as a good thing. Many retirement-age IT workers "are being pushed out the door because the CFO doesn't want to carry their high salaries," says David Foote, chief research officer at Foote Partners.

But some IT managers are taking the threat of an IT brain drain seriously. In the Vital Signs survey, 19% of respondents said they've established flexible schedules to accommodate IT workers nearing an exit, while 12% said they've offered part-time work, and 4% said they've offered delayed-retirement plans.

One innovative technique is to create a division of retirement-age workers who agree to become part-time subcontractors, says Tom Casey, senior vice president and workforce transformation practice leader at BSG Concours.

The concept, which Casey says just a handful of IT organizations have tried so far, benefits employers and retirees alike. There are recruitment, hiring and training savings for companies that retain performers they know and trust who can gradually transfer their knowledge to others.

The benefit to retirees: "They can continue to do something they love" while also pursuing their retirement interests, Casey adds.

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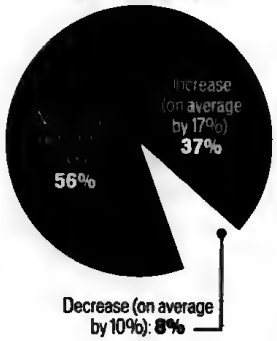
But such programs require careful attention. "You still have to manage those employees," says Stephen Pickett, CIO at Penske Corp. in Bloomfield Hills, Mich. "I would think most organizations would want an outsourcer to manage those employees."

Neal Ganguly, CIO at CentraState Healthcare, says he would consider forming a division of retirement-age IT subcontractors, with the expectation that the older workers would be phased out over time. But that wouldn't work in all scenarios and jobs, he says. For instance, an older IT project manager was recently unsuccessful in his bid to work part-time at CentraState rather than retire. "We needed someone full time," says Ganguly. "You can't have a .5 project manager."

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Taking the of IT

What changes do you expect in your IT spending in the next three months?

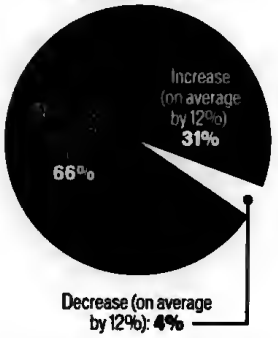


What do you expect will be your biggest management challenge in the next three months?

Top five responses:

Budget constraints	21%
Managing projects	18%
Data security/privacy	9%
Managing/developing personnel	9%
Regulatory compliance	6%
IT governance	6%

What changes do you expect in your IT head count in the next three months?



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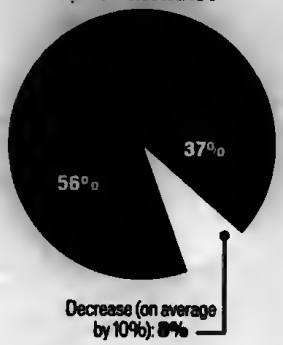
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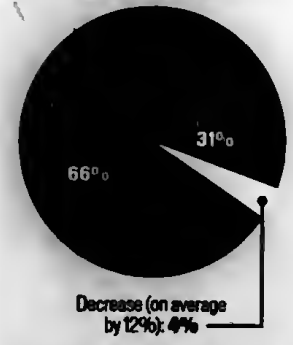


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Wh Sho I H e You?

IT managers share their favorite interview questions and the thinking behind them. By Mary K. Pratt

My favorite answer is, 'I want your job.'

BRIAN A. YOUNG likes to spend time with potential hires, even if they won't report to him. "It's the most important thing you have — the people — so we take a lot of time in hiring," explains the vice president and CIO at Creighton University in Omaha.


Brian A. Young

Young, like many hiring managers, puts great effort into the interview process. He says it's a chance to move beyond the résumé and learn more about the skills and personality traits that candidates can't encapsulate on their CVs — an especially important task as the IT labor market continues to tighten. (See "The Recruit/Retain Shuffle," page 28.)

"It's not frenzied, but it is tougher hiring people. A lot of the activity is to find good talent, [not] just bodies," says Shadman Zafar, CIO for the telecommunications line of business at Verizon Communications Inc.

With that in mind, we asked some IT executives to share their favorite interview questions. Here are their responses.


Shadman Zafar

Describe your toughest assignment so far. "You get an immediate feel for their weaknesses as they're telling a story," Zafar says. "You can also tell how they counter their weaknesses."

Share with me a conversation you had with your boss or others in your life where some feedback you heard was tough to take. "I think that shows a lot about someone's willingness to listen well and act on that feedback," Young says.

In response to this question, a woman once told him that her boss said she

needed to learn when to abandon e-mail and communicate in person. She said she then went around to friends to get their feedback so she could find ways to improve. She also said she was hoping to take a public speaking course to help her communicate better. Good answer.

What will you do if you don't get this job? Responses to this question show how seriously candidates take their career paths, says Katherine Spencer Lee, executive director at Robert Half Technology, a Menlo Park, Calif.-based IT staffing company. Individuals who are also applying for other jobs or planning to further their qualifications in a specific field demonstrate a commitment to their aspirations. That's a plus. But those who can't articulate a plan might just be trying something new on a whim. Moreover, Lee says a candidate's response tells her how fast she has to move: If someone says he has other interviews, Lee knows she has to act fast.


Katherine Spencer Lee

One of the more interesting responses she has had to this question is, "You can't afford not to hire me because I'll go work for your competitor."

Lee says she has hired candidates who have given that response, but it has to be delivered right. It needs to sound confident, not arrogant.

Why should I hire you? "It's the opportunity to see if the individual wants the job," says Sherry Aaholm, executive vice president of IT at Memphis-based FedEx Corp. "I want to see if they're passionate and if they've done their research into that position."


Sherry Aaholm

One interviewee gave a classic wrong answer: "Because you already know me." A previous relationship won't get a candidate the job, Aaholm says, nor will such an uninspired answer.

Have you ever had to terminate someone? Aaholm says responses give her insight into how well candidates work with their teams, whether they're willing to help develop and train people who are struggling, and whether they can make the tough decision to let someone go when it's just not working out.


Robert Rosen

Tell me about a problem your company had and how you used technology to solve it. "You want to see how they use the knowledge, not just that they have the knowledge," says Robert Rosen, CIO at the National Institute of Arthritis and Musculoskeletal and Skin Diseases in Bethesda, Md. Rosen says he slightly alters that question for candidates applying for more customer-oriented IT positions, asking, "What business problem were you trying to solve, and how did you bring value to the customer using technology?"

What are your long-term goals? "I want people who have a vision and a goal," says Robert Moon, senior vice president and CIO at LeapFrog Enterprises Inc., a developer of technology-based learning products in Emeryville, Calif. Moon says he can also determine, based on the candidate's response, whether he can mentor or move the person through the organization to help him reach those goals.


Robert Moon

"My favorite answer is, 'I want your job,' " Moon says.

What book is currently on your nightstand? "It gives me an idea about the type of person they are. Are they readers? Because that means they tend to be learners," says Brian L. Abeyta, second vice president in the project management office of the IT department at insurance provider Aflac Inc. in Columbus, Ga. Abeyta says he's not looking for specific reading material,


Brian L. Abeyta

but rather sincere answers. He says he suspects that people who tell him they're reading a project management methodology book are just trying to impress him.

"I've had a few people say they don't have time to read, or they read magazines," Abeyta says, adding that he puts a premium on getting honest answers.

How close are you to the technology, and how important is that to you? "I've found that most often, [the answer] I get is what's important to them as opposed to what they think I want to hear. It's a broad enough question that people start talking," says Joel D. Jacobs, acting CIO at The Mitre Corp., a not-for-profit company that provides research and development support to the government.


Joel D. Jacobs

Jacobs says he usually hires high-level IT workers, not hands-on developers. Yet various positions still require different levels of in-depth technical know-how. This question helps guarantee the right fit between the candidate and the position.

Jacobs says one candidate initially responded with a "deer in the headlights" look and said he hadn't thought through a question like that. He then explained that he sometimes dug deep down into particular technologies to develop better understandings, although he didn't want to spend all his time working at that level. Jacobs says the candidate's ability to so clearly articulate a response to the surprise question impressed him. Moreover, the candidate's response was consistent with the open position's work requirements, another bonus. Jacobs offered the candidate the job. ■

Pratt *is a* Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

APC's **Neil Rasmussen** is on a mission to improve the planet, and he's not waiting for industry standards.

Man in a Hurry



Neil Rasmussen *founded American Power Conversion Corp. in West Kingston, R.I., in 1981, after earning a master's degree in electrical engineering from MIT. The company got its start in solar electric power before becoming a leader in the uninterruptible power supply (UPS) market in the mid-'80s. APC was recently acquired by Schneider Electric SA and has combined operations with Schneider's MGE UPS Systems subsidiary. Rasmussen is senior vice president and chief technology officer at the new company, called APC-MGE.*

"Excellent" For Service

"The most comprehensive and easy to use product on the market today."

– InfoWorld Review, January 22, 2007

He talked with Robert L. Mitchell about the road so far and what's next.

The Back-UPS was APC's breakout product. What made it successful? We spent a year and a half in the lab making the world's highest-performance small UPS. We took every product that was in the market and took the best of every feature and every performance spec and beat it. It took us a year to get it out. And we sold 30 of those — total.

Then we took a whole different approach: Forget the specs. What would the minimum product be that would be effective at doing this job? And that product was called the Back-UPS.

That product was designed over a weekend. The first plastic bezel on that product was made by a company that made dog food bowls. This was the most complicated thing they ever made. That's how cheap we went.

We changed our whole design philosophy after that: Don't ask [customers] what they want; ask them what they're trying to do, and learn from that. Once we got that model going, we just kept rolling over everybody.

How does APC fit into the big picture with Schneider? They're really gearing up on this whole energy-e ciency avenue, the intelligent design of buildings, and they feel that data centers are a very important part of that story. They felt that it was a whole data center story and not just a UPS story, and APC was going the whole data center route and not the UPS route.

You have a passion about modularized, standardized data centers, right down to how the electrical panels are set up. Those standards still aren't here. Who will develop them? And when? It's not just the equipment. It's the process of designing a data center. We have to standardize that process because ultimately that process develops the specification for what you want.

If you're building something, you'd better have a plan and understand what it means and what its consequences are.

There's a huge amount of mistakes made in that process. They're very costly. That's why we end up with all of this waste in data centers. People made a lot of mistakes because their process was poor. How do you specify density? How do you specify e ciency? How do you have a rational discussion about a growth plan today? Most people throw their hands up and say, "We don't know." It can't be like that. If you're building something, you'd better have a plan and understand what it means and what its consequences are. Those kinds of things we're trying to standardize.

Aren't there standards bodies working on this? In the case of e ciency, sure. You have the DOE weighing in and the Green Grid. In other areas, our view is we're building our own system with our own Lego blocks, and we're going to open that up at the point where other people can make Lego blocks that fit onto our system. But we're not going to sit back and wait for the industry to come up with a standard Lego block. We can't sit around and wait for committees to work on it for three years.

Why can't you wait for standards to emerge? Look at hot aisle/cold aisle layout in data centers: an obvious, well-known technology put out 10 years ago. Every good design firm knows how to do it. But the first standard from [the American Society of Heating, Refrigerating and Air-Conditioning Engineers that included] hot aisle/cold aisle came out a year ago. Ten years ago, everyone knew how to do it. To get a standard out took another nine years. We can't wait for that.

You're proposing that U.S. data centers move to European voltage standards, and you're integrating that feature into your product line. Why would they do that? It's a big e ciency pickup, and it frees up space. Take a megawatt data center and look at the ROI on that. If I could get rid of the [power distribution units], I could pick up 6% of the power capacity of that data center. That's 6% more IT equipment I can put in there. That's a material amount. That changes the ROI of the data center.

What do you feel most passionately about? I am passionate about trying to improve the world. You can imagine that after the sale of this company, I don't need a job. The only reason I'm here is that I'm just so excited about everything we've built so far, and all of a sudden, we have a huge opportunity to save a lot of energy, improve the planet — and we're leading it. It's just a great time to be in the industry. ■

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BELLE MELLOR

Legacy Life Support

Some businesses are finding ways to extend the longevity of aging mainframe-based systems. **By Drew Robb**

SOMETIMES a system just works. Although analysts once confidently predicted the death of the mainframe, it continues to hang on and is even on a growth curve. In the first quarter of 2007, for example, revenue for IBM's zSeries mainframe was 11.7% higher than it was in the previous year. That's more than double the 4.9% gain for the overall server market, according to research firm IDC. But for owners of legacy enterprise systems, it isn't always economical to keep migrating to the latest software or mainframe platform.

That was true for LaBarge Inc., an electronics and electromechanical equipment manufacturer in St. Louis. "Implementing a new ERP system is expensive and risky, and sometimes you have to shut down parts of the business for a while," says George Hayward, director of information systems. "We didn't really need new guts; I just wanted to find a better way for people to get at the data."

The company's 1992-vintage, custom-built ERP/MRP system from Western Data Systems was originally designed to run on IBM's MVS/ESA operating system, which IBM stopped supporting in 1999. Even its successor, OS/390, was mothballed in 2004.

Instead of replacing the mainframe and enterprise software, LaBarge and others in similar positions are finding innovative ways to use middleware, Web interfaces and mainframe emulation to extend the lives of the aging systems that host critical business logic.

But for most users, these applications aren't permanent. The cost of maintenance or changing business needs will eventually signal that it's time to move on to new platforms.

FLUFF AND BUFF

These days, old IBM mainframes are commonly replaced by emulated versions running on Intel-based servers. (Even low-end to midrange servers are now as powerful as decade-old mainframes. Install some middleware, and they can run mainframe software.) Atlantic Cape Community College (ACCC), which has three campuses in southern New Jersey, used that method to stretch the life of a student information, financial and human resources system purchased in 1987 from Information Associates (since acquired by SunGard Data Systems Inc.)

"The applications have been upgraded, modified and tweaked, but they are still Cobol software running on the original operating system," says Patrick Sweeney, ACCC's director of administrative computing.

The school had been running these applications on an IBM 9221 191, an 11 MIPS mainframe introduced in 1994. It runs IBM's Virtual Machine and VSE operating systems.

But when it came time to plunge ahead to the next series mainframe, Sweeney balked. "When IBM started putting the pressure on us to go forward with the new zSeries mainframes, the costs were prohibitive and the jump in MIPS [from 11 to 80] was too extreme for what we needed," Sweeney

says. "At that time, we decided to experiment."

ACCC wound up buying an 18 MIPS tServer from T3 Technologies Inc. in Tampa, Fla. The tServer line, which scales up to 200 MIPS, is based on IBM's xSeries servers, which use x86 processors. The servers run SCO Unix, and on top of that is an application called FLEX-ES that emulates 31-bit IBM mainframes.

"It does everything that the mainframe does but offers so much more flexibility in terms of things like backup capabilities, connecting laser printers and direct-attached storage," says Sweeney. "It opened a whole new world to me to take advantage of things I never could afford on a mainframe."

Sweeney has been using the tServer since 2002, but he may be forced to migrate in the next few years. With OS/390 programmers retiring, SunGard will eventually cease supporting its applications on that system.



"[Emulation] opened a whole new world... of things that I never could afford on a mainframe.

PATRICK SWEENEY, DIRECTOR OF ADMINISTRATIVE COMPUTING, ATLANTIC CAPE COMMUNITY COLLEGE

INTERFACE LIFT

Sweeney says that his staff is comfortable using terminal emulation and a green-screen, text-only interface. Most companies, however, want something more modern and choose another method of keeping existing mainframe applications running: adding a fancier front end.

"Users of corporate systems have come to expect the jazz of rich user interfaces and Web 2.0 technologies such as blogs and RSS," says Murray Laatsch, enterprise architect at Online Business Systems in Calgary, Alberta. "The green screen is dead and is not tolerated for long among even the most inexperienced users who have spent more than a few hours browsing the Internet."

The simplest remedy is to put a new Web front end on the existing application. But if it doesn't add any functionality, that is seldom enough.

"Giving legacy systems a new [user interface] has limited value," says Steve Craggs, director of market research firm Lustratus Research Ltd. "Staff will have to be retrained, and it is a bit like putting lipstick on a pig — nice cosmetically, but the underlying application is unchanged."

That's why LaBarge's Hayward did more than just Web-enable his ERP system. He used Information Builders Inc.'s WebFocus business intelligence software to expand its usability. And he's proud of the results.

"We have a 15-year-old terminal mainframe ERP system that is looking more and more like Amazon.com or any Web-based system," he says.

Previously, users would submit a report request to IT — say, for an update on product shipments — and the next day, they would have to scan through a few-hundred-page report to find the information they needed.

The new system pulls data from the VSAM files on the mainframe and creates a live mirror of the data in a SQL database. Now users can execute their own queries and drill down into the underlying data.

"It's completely changed the way we handle the data," Hayward says. "Before, we just reported after the fact. Now we can see what is going on in our factories as it is happening."

TERMINAL CASES

In ACCC's case, an emulated mainframe extended the life of its systems for several years, but soon it will have to move to a new platform to maintain application support. LaBarge, on the other hand, used middleware to bring new functionality to its mainframe systems.

"The legacy system works, so why retire it?" unless it can't keep up with changing demands, says Craggs.

But for some systems, retirement is inevitable. Nutrition and household products maker Shaklee Corp. in Pleasanton, Calif., has custom-written applications going back decades, many without clear documentation. "Just slapping a Web front end on it makes it look pretty and extends its life for a time, but it is not going to be able to run like that forever," says Gregory Fina, Shaklee's director of IT architecture and quality.

On the other hand, he says, "If you build the [replacement] system to be flexible and scalable, you can quickly make changes to better support the business."

The company is undergoing a major change of both its IT systems and its processes. About 18 months ago, Shaklee started outsourcing the support of its mainframe systems. This allows its IT staff to focus on obtaining newer skills and solving business problems, rather than supporting the existing applications. In the meantime, the mainframe applications are being replaced with Web-based applications.

This is a slow process, especially since many of the old applications weren't documented. But in the end, Fina expects that it will have been worth the effort.

"You can look at a system that has been running for 20 years, and the cost to replace it is huge," he says. "But you also have to look at the incremental cost to support it and the incremental costs of changing the system to meet new business needs." ■

Robb *is a* Computerworld *contributing writer based in Los Angeles.*

Pulling The Plug On Cobol

A KEY REASON to migrate from older systems is the difficulty of finding Cobol programmers. Gregory Fina, director of IT architecture and quality at Shaklee, is outsourcing support of aging systems so his staff can learn newer technologies.

And Shaklee isn't the only company dropping Cobol support. In a November 2005 Forrester Research Inc. survey of 347 IT decision-makers in companies with at least 100 IT staffers, three quarters of the respondents said their companies were planning to eliminate or reduce their Cobol applications within three years.

– DREW ROBB

Taking a Trip To Policy Hell

Be specific in your policies, our manager learns, or users will find ways to **skirt the letter of the law.**

HOW often have you heard, "I'm not sure you can do that; there isn't a policy in place"? I hear it too often, because I hate writing policies. And I hate writing policies because at a very engineering-centric company like mine, generic policies don't go over well. If I were to write a policy stating, "No running with scissors," I would be asked to define "running." How fast can you walk before it counts as running? Does the policy apply to small, blunt scissors?

So, when I write information security policies, there's no such thing as being too specific. I tried to keep our acceptable-use policy fairly generic, not mentioning any specific applications or technologies. Afterward, when I found out that a business unit was using Skype, the manager said, "Show me a policy stating that Skype is considered unacceptable use." He argued that his department's use of Skype was saving the company money and increasing productivity, while I countered that Skype is a risky application. His argument held sway until I rewrote the policy to call out specific popular but risky programs.

More recently, I wrote a policy to ensure that all devices on the production network are properly patched. A security assessment had demonstrated the immediate need for such a patch management policy. But the network manager pointed out that in the Cisco world, devices don't get "patched" — they get a complete IOS revision. She knew exactly what I was referring to, but she wanted the policy to be called the "security software update policy."

■ If I were to write a policy stating, 'No running with scissors,' I would be asked to define 'running.'

Her feedback was part of our peer review process. Although peer reviews take more time — because you have to submit them, revise them and resubmit them — I like this approach. For one thing, it helps ensure that policies are enforceable. The network manager might note that a policy's wording would require redesigning the entire network, dooming the policy to failure.

Peer review also means no policy comes as a surprise. And the process is respectful of peers. It keeps me from churning out policies that generate resentment. Nonetheless, all that negotiating of terms and content is policy hell for me.

GRABBING ATTENTION

One problem with policies is that once they are published to a Web site, they languish until someone asks, "Do we have a policy regarding such and such?" That passive approach may be fine for many policies, but others need to be actively promoted. Several months ago, an employee uploaded algorithmic code to his Yahoo "briefcase." In the end, we couldn't prove if the employee knew that he wasn't supposed to transfer code to a personal account even if his intention was, as he said, to work from home on the weekend.

This incident shows that we need a way for employees to electronically sign off after reading important acceptable-use or intellectual property protection policies. Such a tool would also be a way to generate general security awareness. Video might be a particularly effective way to make sure our important policy messages stick in people's minds.

I will start the hunt for vendors that offer policy and security training, and that provide compliance training tools, and I'll report back in a later installment. Until then, it's back to policy hell. ■

This week's journal is written by a real security manager, **"Mathias Thurman,"** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

Trouble Ticket

ISSUE: Writing policies is a pain in the neck, and users too often ignore them anyway.

ACTION PLAN: Embrace the process, but find a way to get user sign-off.

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COMPUTERWORLD
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■ OPINION

Paul M. Ingevaldson



Deciding Which Way to Decide

DURING MY YEARS in the IT business, I had the privilege of working with some of the most intelligent and devoted people I have ever known. I usually found IT folks to be thoughtful, insightful and well meaning. Generally, they put the affairs of their company ahead of their own personal comfort, as evidenced by their total commitment to resolving problems — often after regular work hours.

One area that I always found lacking in IT, however, was management training. Promotions to the role of manager were usually based on some particular accomplishment or just a vague feeling on the part of upper management — seldom on hard empirical evidence of managerial skill. I think this is common in many professions. As a result, much management training is of the on-the-job, seat-of-the-pants variety.

Thus, I thought I would share some personal approaches I used when I coached my subordinates about how to better perform their jobs or manage people. These ideas were developed by others. I picked them up along the way and, unfortunately, have no idea where they came from. But they worked for me, so they might work for you.

The one I probably used most often is the concept of three decisions. I used this to describe to a new subordinate or a new manager the performance I expected, or to guide someone whose decision-making was less than optimal.

It goes like this: Every decision that you make can be categorized in one of three ways relative to your boss:

The decision that you make and don't tell your boss about. Generally, you don't tell the boss because you assume he has given you the implicit authority to make the call and isn't really interested in knowing about the decision.

In some cases, though, you may want to keep the boss in the dark as to the outcome. This approach can be very risky if the boss finds out and is surprised at the decision.

■ Every decision that you make can be categorized in one of three ways relative to your boss.

The decision that you make and then tell your boss about. This is a bit lower-risk, but it also shows that you think you have the authority to make the call. In this case, you learn very quickly whether you do. If not, the boss is usually more understanding, since at least you were forthcoming with the information.

The decision you tell your boss about and then you make. This is the lowest-risk type of decision, but one that also has its downside. If you run to your boss before making every decision, at some point he might wonder if you are needed in the job.

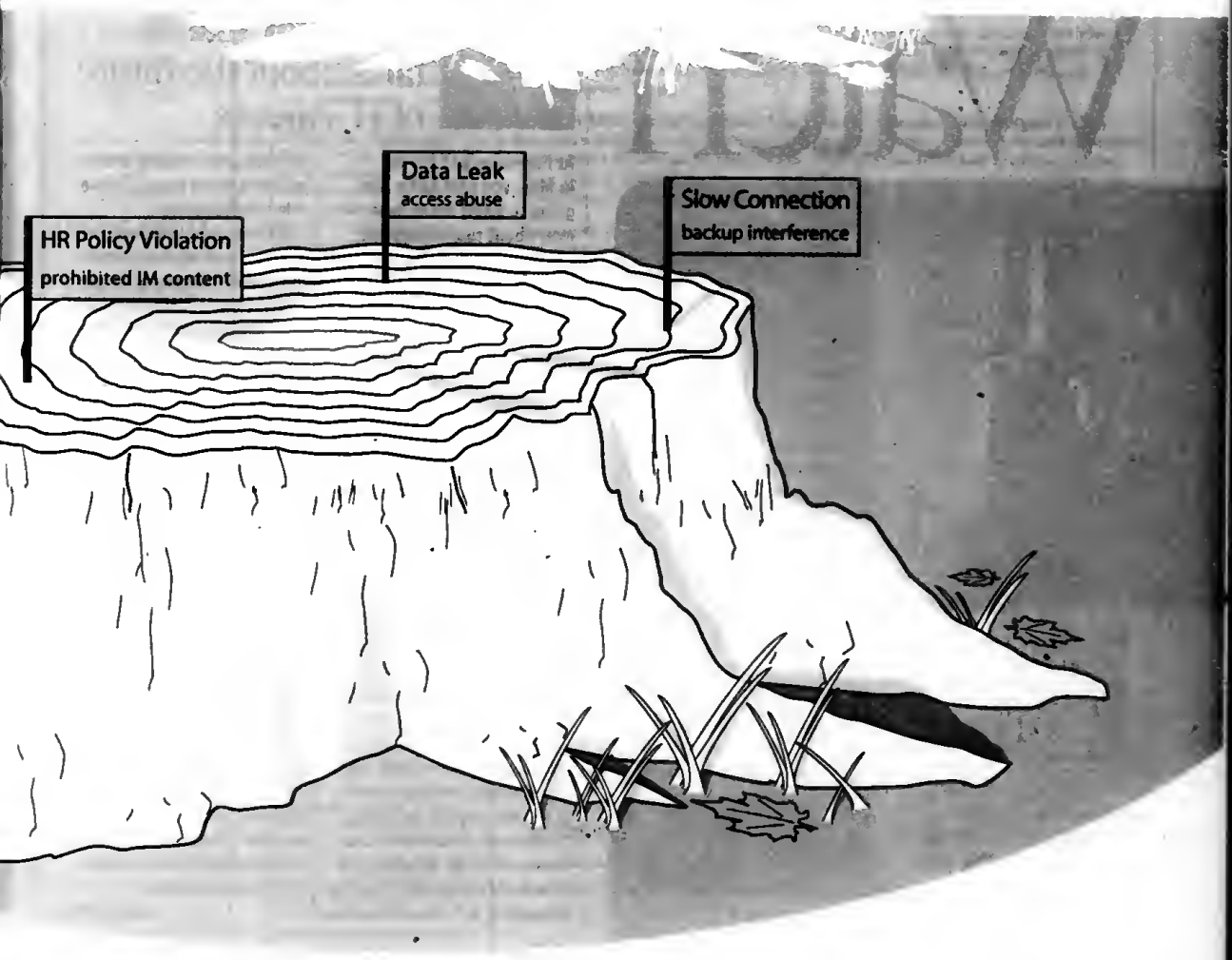
I would tell my subordinates that the rules about which type of decision to use change every day and in every circumstance. Which one you select will depend on lots of intangibles: the implications of the decision, the results of a recent similar decision, the current profitability of the company, the status of the IT budget, the reputation of the user affected, the amount of money involved — even the mood of the boss. You must consider everything before you decide which way to decide.

Another variable is the level of trust between you and your boss. If you are new to working for this person, then the prudent path is to err on the safe side and clear most decisions through him. This way, you'll discover whether you and the boss tend to be on the same wavelength. As your relationship grows and trust develops, more and more decisions can be Type I or Type II. The more your decisions achieve positive results, the more hands-off your boss will be and the more freedom you will have to make your own decisions.

Even so, the process is never perfect. Sometimes you'll surprise the boss, and other times you'll be overly cautious. But if you and your boss have an open relationship, a discussion about the three decisions can lead to a much more rewarding experience. And from the boss's point of view, this type of discussion is an excellent way to grow and develop management talent in your organization. ■

Paul M. Ingevaldson *retired as CIO at Ace Hardware Corp. in 2004 after 40 years in the IT business. Contact him at ingepi@aol.com.*

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Career Watch



Business Meets Academia

>>> HOW U.S. COLLEGES AND UNIVERSITIES ARE WORKING WITH THE PRIVATE SECTOR TO DEVELOP NEXT-GENERATION IT LEADERS

At the University of Michigan, IT industry executives recently recommended placing more emphasis on student development in areas such as project management and leadership development, says C. Olivia Frost, interim dean of the School of Information. Within project management, this includes teaching students how to work with people with different skills and areas of specialization on a project team.

Students "need to learn how to work well with people with different backgrounds," says Frost.

Employers also want entry-level IT workers who have strong communication skills as well as leadership capabilities. "We try to recruit [graduate students] with those skills," says Frost.

Other feedback from the private sector has led to the development of master's specializations such as social computing, which was introduced in March. This program includes training to develop "recommender" systems such as those used to advise consumers on things like movies and restaurants. Another area of concentration is social network analysis – determining how networks of people form around technology "pools," says Frost.

Another recent master's specialization is community informatics, which focuses on using technology to serve underprivileged communities.

– THOMAS HOFFMAN

University of Michigan School of Information, Ann Arbor	
Yes	
Each student in the master's degree program must now obtain six credits of practical work experience, including internships.	
Master's specializations in archives and records management, community informatics, human-computer interaction, incentive-centered design, information analysis and retrieval, information policy, library and information services, preservation of information, and social computing	
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PAGE COMPILED BY JAMIE ECKLE.

Q&A

Bobby Cameron



Forrester Research

At Forrester's IT Forum in May, you said CEOs are going to know more than ever about technology but IT staffers will know less, with as few as 20% of them having IT skills within the next five years. How do you run an IT department with a staff of nontechies? This is all about outsourcing – either directly through contracts between IT and a provider or indirectly through BPO [business process outsourcing] and [software as a service]. The techies that IT will need to keep are architects and DBAs. The balance are project managers, business analysts, IT-business relationship managers and vendor managers. I suspect the average of IT staffers with deep IT skills will hover in the 30% to 40% range because some firms will want to own as much of the technology skill set as they can. And while IT shops will get smaller, the total number of people engaged in technology development, deployment and operations will grow. Technology use in the world of business technology will explode, with many of the roles formerly carried out by IT done by end users, power users, BPO providers and outsourcers.

CEOs are going to know more about the application of technology – about the business results of technology use – much as they understand manufacturing, engineering, or sales and marketing. But no CEO is about to understand SAN tuning or JavaBeans.

You talked about moving "IT cowboys" out to the fringes. Where is that, exactly? The fringes are the edges of the technology stack, where competitive differentiation is created. In one dimension, using the seven-layer ISO technology stack, the fringe is the very top layer of the applications – like above the [service-oriented architecture] interfaces, where new business models are experimented with. In another dimension, the fringe is at the edge of the network where the X Internet – the extended and executable Internet – connects the physical world with the virtual world through sensors, RFID chips and the like.

– JAMIE ECKLE

The Google Ideal

Top prospective employers among IT students:

1	Google Inc.
2	Microsoft Corp.
3	IBM
4	Apple Inc.
5	Intel Corp.

SOURCE: THE UNIVERSUM INC IDEAL EMPLOYER SURVEY OF 44,064 UNDERGRADUATE STUDENTS FROM 484 U.S. SCHOOLS, JUNE 2007

78% **Percentage of executives who say they could outperform their bosses.** Many of those execs think highly of themselves, rather than poorly of their bosses, since only 25% of the respondents said their bosses were doing a below-average or poor job.

SOURCE: MARCH 2007 KORN/FERRY INTERNATIONAL EXECUTIVE QUIZ, BASED ON A GLOBAL SURVEY OF 2,500 EXECUTIVES REGISTERED WITHIN THE FIRM'S ONLINE EXECUTIVE CENTER, EXORNFERRY.COM

Career Watch

■ Q&A

Bobby Cameron



The **Forrester Research** analyst talks about the future of IT careers.

At Forrester's IT Forum in May, you said CEOs are going to know more than ever about technology but IT staffers will know less, with as few as 20% of them having IT skills within the next five years. How do you run an IT department with a staff of nontechies? This is all about outsourcing – either directly through contracts between IT and a provider or indirectly through BPO [business process outsourcing] and [software as a service]. The techies that IT will need to keep are architects and DBAs. The balance are project managers, business analysts, IT-business relationship managers and vendor managers. I suspect the average of IT staffers with deep IT skills will hover in the 30% to 40% range, because some firms will want to own as much of the technology skill set as they can. And while IT shops will get smaller, the total number of people engaged in technology development, deployment and operations will grow. Technology use in the world of business technology will explode, with many of the roles formerly carried out by IT done by end users, power users, BPO providers and outsourcers.

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– JAMIE ECKLE





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women in IT

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SharkTank

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Chain of Demand

Marine Corps pilot fish gets his first assignment at this mil-spec data center: Vacuum the floor. Fish knows how to run a vacuum cleaner, but he's not sure where to find an electrical outlet to use. "I didn't want to wander around looking lost, so I asked my sergeant, who I later learned was an idiot, where I could plug it in," says fish. "He grabbed a tile puller, raised up a section of the floor and told me to plug into the only open socket. About half a second after I turned on the vacuum, the room suddenly became quiet as all 23 servers turned off at the same time. Apparently, UPSs were not a priority before I got there. To say the least, there were many upset people that day. That afternoon, UPSs were ordered, and we were all told to only plug into outlets that were above the floor."

Self-documenting

Pilot fish writes a custom program that performs certain functions on a server every night. "The program dumped its junk data to a file, which was overwritten every time the program ran," says fish. "I know now this isn't a good way to do this, but at the time – the early 1990s – it was pretty standard practice." But a week after the program goes into production, fish is called into the office of the big boss, who demands to know why fish hasn't documented what to do with that file – the one named DELETE.ME.

The Wonderful World Of Physics

User keeps requesting a newer, lighter laptop. It's not in the budget for this year, but he continues to ask anyway, says a pilot fish on the scene. "One day while I was setting up his e-mail synchronization, he actually asked me, 'If I delete some of these e-mails, will my laptop get any lighter?' " fish reports. "I had to explain to him that it didn't work that way, but I was nice enough not to mention that the 50 pounds of paper in his laptop bag might solve the problem."

Missed It by Just That Much

It's the early 1980s, and these two IT groups have spent a week reviewing their software, trying to figure out which side has the problem that has stopped data transmission between them. "After rigorous but unsuccessful testing, a tech from one group decided to follow the cable from one system to the next," says a pilot fish in the know. "Four feet from the server, the cable ran under the line printer's paper catcher. He asked a tech from the other group to lift it. Both discovered two connectors facing each other – about an inch apart."

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■ FRANKLY SPEAKING

Frank Hayes

What, IT Worry?



LAST TUESDAY, Craigslist vanished from the Internet. So did LiveJournal and Technorati. CNET.com and Second Life were reportedly gone for a while too. What happened? The data center they all shared went dark because of a power failure. Simple enough, right? Except that the main point of using that data center was so they'd never have to *worry* about power failures.

See, a major marketing feature of 365 Main, the humongous San Francisco collocation facility that failed last week, is that it offers power that just won't quit. When power from the local utility goes out, a bank of 10 3,000-horsepower diesel generators is supposed to kick on automatically and keep running until stable power is restored — for days, if necessary.

In fairness to 365 Main, it always worked that way in the past.

But not last week. Early Tuesday afternoon, external electric power started fluctuating wildly. A nearby underground transformer exploded. Power went out for a large section of downtown San Francisco, including the Financial District — up to 50,000 customers in all.

And for reasons that 365 Main is still investigating, some of its backup generators didn't fire up as they should have. It took about 45 minutes for on-site engineers to start the generators manually.

By then, the damage was done for Craigslist, LiveJournal and the others — between 20% and 40% of 365 Main's customers. Their servers went down hard. And instead of the magically continuous service their businesses had counted on, those servers had to be brought back up the hard way, slowly and carefully.

The lucky ones were offline for only a few hours. But even for them, the magic was gone.

It should be gone for the rest of us, too. It's time to accept some hard reality.

Bad things happen. They happen no matter how carefully we plan for them, because we can't plan for everything. They happen no matter who we've paid to take on the job of handling those bad things, no matter how much we've paid, no matter what promises we've been given.

■ Collocation and outsourcing don't work – at least not if what we expect them to do is solve our business continuity problems.

Collocation and outsourcing don't work — at least not if what we expect them to do is solve our business continuity problems.

They won't do that. They can't. We shouldn't expect them to.

In fact, we should assume that they won't, and plan accordingly.

That's true even if a company like 365 Main brags that its power can't go down. It can. Murphy willing, it will. And nothing 365 Main does after the fact can make whole the lost sales, lost customers and lost confidence that come in the wake of that failed boast.

So, is outsourcing always the wrong move? Of course not. *Trusting* outsourcers — that's the wrong move.

We have to believe they'll do their best. Otherwise, we shouldn't be doing business with them. But we also have to know that they're not perfect, no matter what their brightly colored brochures say.

We can hand off work, but we can't hand off responsibility for our company's IT functions. That's still ours.

Which means we can't outsource sleepless nights. We can't quit developing what-if scenarios and contingency plans. We can't stop looking for ways to backstop our vendors' "bulletproof" services — just in case a bullet somehow gets through.

When it comes to reliability, worry is good. Trust? Not so much.

One of the 365 Main customers, online retailer RedEnvelope, had the right idea. RedEnvelope maintained a backup data center in Cincinnati to avoid the results of just the sort of problem that struck last week.

But after two years without a glitch in San Francisco, 365 Main issued a press release announcing that RedEnvelope had shuttered the Ohio facility.

That was Tuesday morning. That afternoon, RedEnvelope was offline. ■

Frank Hayes *is* Computerworld*'s senior news columnist. Contact him at frank_hayes@computerworld.com.*

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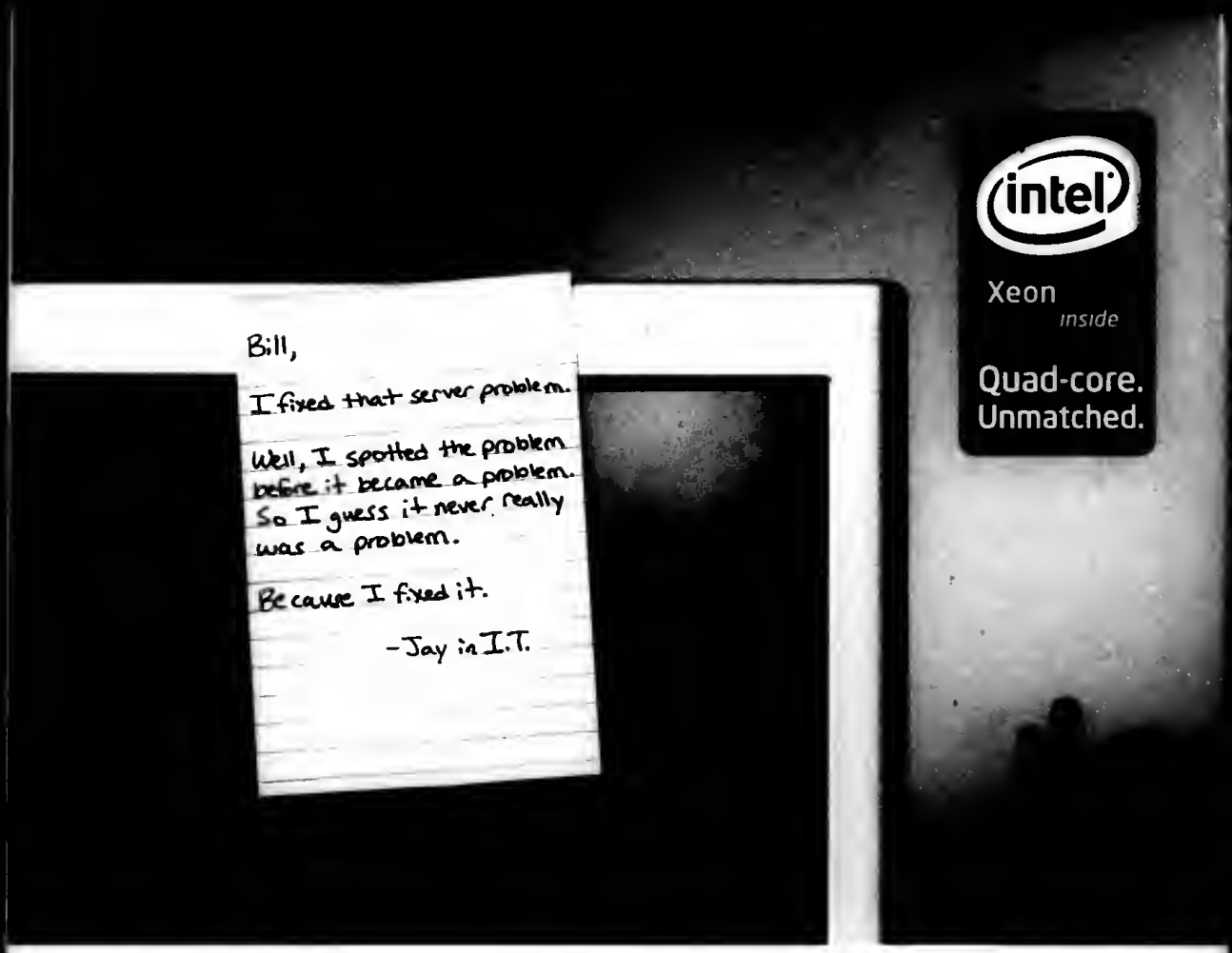
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